Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Applications of America Online, Inc.	)	CS 00-30
and Time Warner, Inc. for transfers of Control	)	

PETITION TO DENY

of

CONSUMERS UNION

CONSUMER FEDERATION OF AMERICA

MEDIA ACCESS PROJECT

and

CENTER FOR MEDIA EDUCATION

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April 26, 2000

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To: The Commission

PETITION TO DENY

Consumers Union,[1] the Consumer Federation of America,[2] Media Access Project[3] and the Center for Media Education[4] (collectively, "CU, *et al.*"), respectfully submit this *Petition to Deny* the *Applications of America Online, Inc and Time Warner, Inc. for Transfers of Control*, Docket No. CS 00-30. For the reasons set forth below, grant of the applications would be contrary to the public interest, and should be denied.

The groups do not dispute that AOL and Time Warner have sought to create a new form of business venture, which, if properly structured, might produce certain social benefits. However, for the Commission to make the requisite finding that this transaction is in the public interest, the AOL Time Warner combination would have to be significantly restructured and

[1] Consumers Union is a nonprofit membership organization chartered in 1936 under the laws of the State of New York to provide consumers with information, education and counsel about goods, services, health, and personal finance; and to initiate and cooperate with individual and group efforts to maintain and enhance the quality of life for consumers.

[2] Consumer Federation of America is the nation's largest consumer advocacy group, composed of over two-hundred and forty state and local affiliates representing consumer, senior citizen, low-income, labor, farm, public power and cooperative organizations, with more than fifty million individual members.

[3] Media Access Project is a non-profit public interest telecommunications law firm which promotes diversity and competition in the marketplace of ideas on behalf of consumer, civil rights, civil liberties and other citizens' groups.

certain business practices, interoperability standards that they currently employ must be modified or restricted. Otherwise, the optimal free speech and competitive benefits of communications technology may never be realized.

As is more fully explained below, if the Commission nonetheless were to grant the applications in any form, it should, at the least, impose the same kind of requirement for "open access" to the parties' cable systems as America Online, Inc. ("AOL") has asked to be imposed upon AT&T Corp. ("AT&T") The Commission should also require divestitures and/or structural safeguards, as discussed below.[5] Specifically, the Commission should:

a) require AOL to divest its interest in DirecTV's ultimate parent, General Motors;

b) require Time Warner, Inc. to divest its interest in Road Runner, the second largest cable broadband ISP;

c) require AT&T and MediaOne Group, Inc. ("MediaOne") to divest their interests in Time Warner, Inc. and Time Warner Entertainment Co., LP ("TWE") respectively, or prohibit AOL and Time Warner from consummating the merger until AT&T and MediaOne divest these interests.

Consumers Union,[6] the Consumer Federation of America,[7] Media Access Project[8] and the Center for Media Education[9] (collectively, "CU, *et al.*"), respectfully submit this *Petition to*

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[4] The Center for Media Education is a national nonprofit organization dedicated to creating a quality electronic media culture for children and youth, their families and the community.

[5] The factual assertions in this *Petition* are supported by the declaration of Gene Kimmelman, Co-Director of the Washington office of Consumers Union, Attachment A hereto. In the event the applications are not dismissed, the applications must be designated for hearing because there are substantial and material issues of fact as to whether their grant would be in the public interest. 47 USC §309(e).

[6] Consumers Union is a nonprofit membership organization chartered in 1936 under the laws of the State of New York to provide consumers with information, education and counsel about goods, services, health, and personal finance; and to initiate and cooperate with individual and group efforts to maintain and enhance the quality of life for consumers.

Deny the *Applications of America Online, Inc and Time Warner, Inc. for Transfers of Control*, Docket No. CS 00-30. For the reasons set forth below, grant of the applications would be contrary to the public interest, and should be denied.

As is more fully explained below, if the Commission nonetheless were to grant the applications in any form, it should, at the least, must impose the same kind of requirement for "open access" to the parties' cable systems as America Online, Inc. ("AOL") has asked to be imposed upon AT&T Corp. ("AT&T") The Commission should also require divestitures and/or structural safeguards, as discussed below.[10]

INTEREST OF PARTIES

Petitioners appear in this proceeding on behalf of their members and others who watch television, subscribe to cable services, and use the Internet. Those citizens have First Amendment protected rights to speak, to be heard, and to receive information through access to cable television and broadband telecommunications. The Communications Act also guarantees their right to benefit from development of a fully competitive market in all telecommunications services.

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[7] Consumer Federation of America is the nation's largest consumer advocacy group, composed of over two-hundred and forty state and local affiliates representing consumer, senior citizen, low-income, labor, farm, public power and cooperative organizations, with more than fifty million individual members.

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SUMMARY:

POLICY CONCERNS RAISED BY THE AOL TIME WARNER MERGER

A. CROSS OWNERSHIP BETWEEN AT&T AND AOL IN TIME WARNER

The AOL Time Warner merger adds a dangerous new dimension to the emerging structure of the cable TV/broadband Internet industry (see Exhibit ES-1). It extends the reach of two huge, vertically integrated firms across the cable TV, broadband Internet and narrowband Internets. It removes the most likely competitor for the still entrenched cable TV monopolists. By bringing AOL into the club of huge cable companies, it dramatically diminishes the likelihood that it will compete head-to-head with cable companies in the video programming market. By focusing the attention of the largest narrowband ISP on cable modem service as the delivery medium for the broadband Internet, it dramatically reduces the chance that telephone based DSL service will become a significant competitor for high-speed Internet service in the residential sector. Therefore, the AOL Time Warner merger is inconsistent with the pubilc interest and should be rejected or substantially restructured by the Federal Communications Commission (FCC).

An emerging AT&T-AOL duopoly through the combination of AT&T/MediaOne plus AOL Time Warner has a pervasive impact across several markets and concentrate ownership in many different aspects of market structure.

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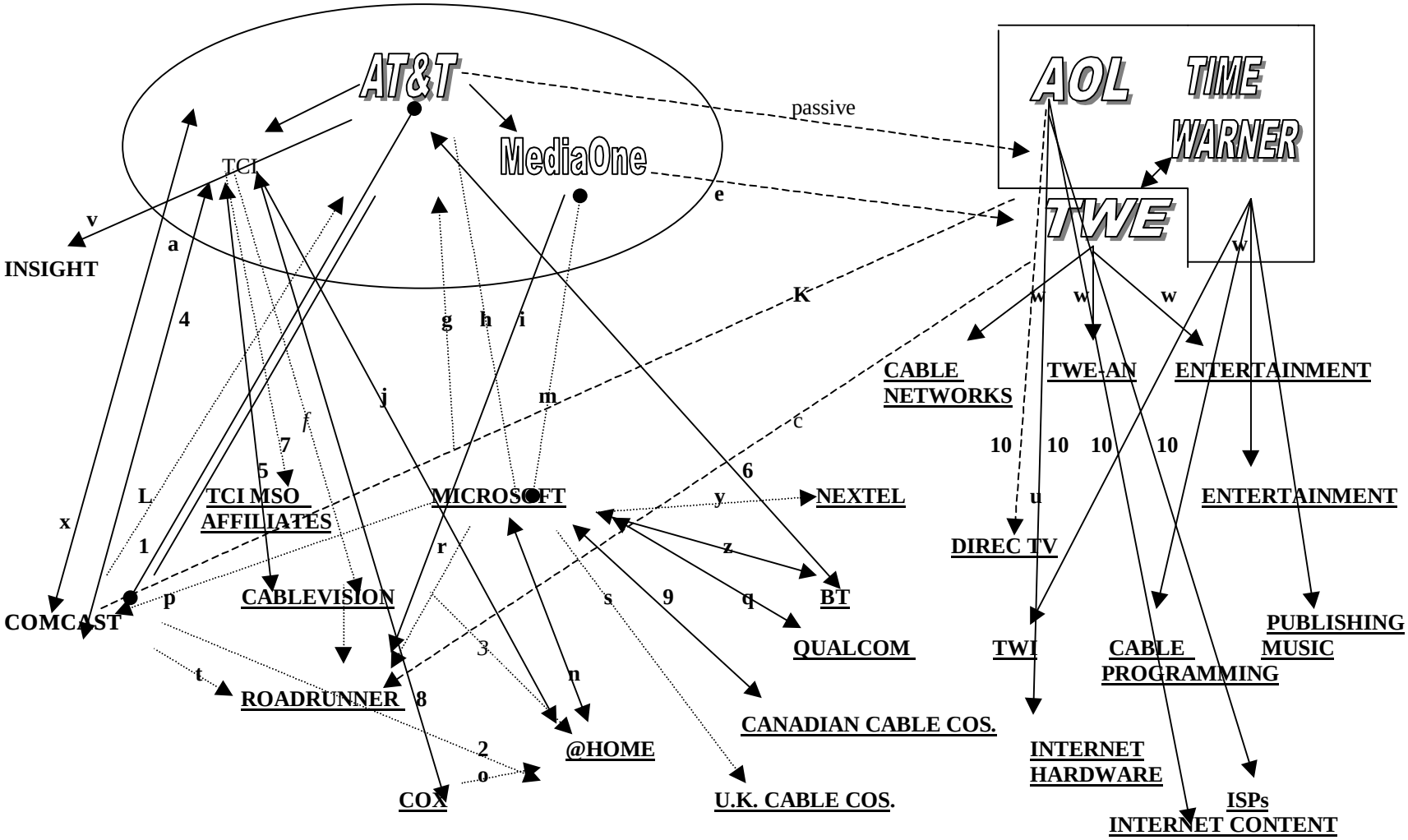
are not dismissed, the applications must be designated for hearing because there are substantial and

EXHIBIT ES-1

AN INTEGRATED DUOPOLY AT THE CORE OF AN EXPANDING BROADBAND CARTEL



- The horizontal aspects of these mergers involve concentration of cable programming (to the extent that programs compete to gain access to customers) and concentration of broadband Internet services (to the extent that @Home and RoadRunner sell the same thing to the public, or that narrowband competes with broadband). AOL time Warner also involves an inappropriate ownership relationship between the second largest cable television company and its direct competitor, satellite provider DirecTV.

- The merger vertically integrates programming and distribution services substantially in narrowband (by linking AOL and Time Warner) and significantly in broadband (to the extent that AOL, @Home and RoadRunner are interrelated). It also involves the integration of distribution and equipment (to the extent that AOL has made forays into equipment, which will now be integrated with Time Warner's distribution).

- It is a conglomeration in that it involves product extension merger, integrating Time Warner's broadband content and distribution into AOL's narrowband.

The horizontal concentration problems arising from the AT&T-MediaOne merger and the vertical/conglomerate problems resulting from the AOL-Time Warner merger are severely compounded by the cross ownership of AT&T in AOL. Eliminating the cross ownership problem would create much greater balance in the capital size of the dominant firms. It would balance their assets (the cable, telephone giant would face the dominant Internet/content firm). Each would have better incentives to bargain at arms length with the other. This more competitive dynamic would open the door to greater business opportunity for firms not affiliated with the two dominant firms, especially if a non-discriminatory, open access requirement were imposed by the FCC.

B. CHOKEHOLD ON EMERGING INTERACTIVE TV CONTENT

The AOL Time Warner merger also raises a fundamental question about whether this new giant will be able to quickly capture the new product market for interactive TV. The wedding of these two dominant firms—with their control over access to the cable broadband infrastructure and control of the world's largest narrowband subscriber base—gives them a chokehold on the future development and preservation of a robustly competitive Internet.

AOL Time Warner will have substantial market power in the video and Internet access markets. It will possess an enormous stockpile of popular television channels (approximately one-half of the of the 20 most popular cable networks) and other valuable content (e.g., 33 magazines, 10% of the nations books, one-sixth of the domestic record market, one-fifth of domestic movie production). This will be combined with AOL, @Home and Roadrunner Internet services (more than three-fourths of the U.S. broadband internet business and more than one-half of the narrowband business) that are distributed on affiliated cable television systems. As a result, AOL Time Warner will be in a position to dominate the new consumer market for combined services.

The unique combination provides AOL Time Warner with immense economies of scale and scope, but their market power over content goes well beyond these basic economic factors. Closed proprietary products such as e-mail, instant messaging, buddy lists, calendar management, electronic programming guides and keyword search engines have become the basic utilities of Internet communications and usage. Consumers hesitate to give these up, since changing ISPs requires significant changes in identification, cuts the consumer off from communities of interest, or requires significant learning costs. These interfaces are the sticky

features that glue the customer to the service provider. Leveraging these Internet utility functions of AOL, the new entity will be able to bundle in a variety of proprietary Time Warner products (e.g. Time Warner cable programming, entertainment and music), as well as other products (e.g. telephone service). Controlling both content and distribution, the company can design interfaces that capture and lock-in customers, while they lock-out competitors, except on terms and conditions that are set by the entity controlling the choke point.

The new consumer market for interactive services may combine the strengths of the merging companies without traditional public protections against monopolistic practices. For example, AOL TV involves the combination of television programming and split-screen functionality to access Internet services through cable television transmission using a remote control device. With the simple "point and click" ease of channel surfing, consumers could select an AOL icon that opens the door to all AOL Internet services (on part of the screen) while they are simultaneously watching television. Despite enormous market power over the content of this new service, and the cable distribution systems that carry the service, it is unclear whether AOLTV would come under the cable programming nondiscrimination requirements of the 1992 Cable Act, or even AOL Time Warner's open access promises.

C. OPEN ACCESS IS EVEN MORE CRITICAL TO A COMPETITIVE BROADBAND INTERNET IN LIGHT OF THE PROPOSED MERGER

The threat posed by the horizontal concentration and vertical integration of this digital cartel with a closely integrated duopoly at its core is heightened by the efforts of these companies to impose a fundamental change on the public policy governing communications

infrastructure in our society. Before they purchased cable TV companies, both AT&T and AOL recognized the problem that closed, proprietary networks pose for fair competition. They were advocates for the proposition that governments must intervene to ensure open access to the broadband Internet (and still are when it comes to transmission systems they do not own).

In comments filed at federal and local agencies, AOL and AT&T presented a detailed description of the broadband market structure that gives rise to the need for open access. The key characteristics included: (1) vertical integration between access and content, (2) market power in related markets, (3) paucity of alternative facilities, (4) the essential nature of access, (5) a need to ensure openness in the design of the architecture of the network, (6) stimulation of investment by increasing services, (7) the inability of narrowband to compete with broadband, (8) the high cost to consumers of switching technologies, (9) bundling of monopoly and competitive services.

While AT&T and AOL demanded a great deal as outsiders of the cable TV industry, they have offered much less now that they are the dominant insiders in the industry. What they offer falls far short of the key elements of open access that have produced the remarkable flowering of communications, commerce and creativity on the narrowband Internet. The narrowband Internet infrastructure is operated in a fastidiously open manner based on three sets of policies.

- The architecture of the Internet is based on open standards and end-to-end (transparent) design principles.

- The communications infrastructure on which this network architecture is built is operated on a nondiscriminatory, common carrier basis with few technological constraints in accommodating all of the demand for interconnection.

- Policy makers have adhered to a strict regime of open communications.

Because of these policies, "proprietary" restrictions on or governmental intrusions into the flow of information have been minimized. Consumers and service providers have achieved a high degree of freedom to reach the Internet and, therefore, each other. Any (and therefore every) Internet Service Provider (ISP) has access to the communications infrastructure on the same rates, terms and conditions as every other similarly situated ISP and the infrastructure is operated in a manner that does not discriminate between ISPs. Any (and therefore every) consumer has the ability to reach every other consumer or ISP without restriction. Open access to the communications network has resulted in vigorous competition to provide services to consumers. This unprecedented openness of communications has combined with the relative ease of production and distribution of information to create uniquely rich and diverse civic discourse.

- As the broadband Internet becomes the primary platform for electronic commerce and the central marketplace of ideas in the "Internet Century," competition and open communications must be maintained to the greatest extent possible.

Cable companies, who own the networks that are likely to be the dominant communications infrastructure for the broadband Internet for the foreseeable future, claim that network engineering imposes technical limitations on the cable-based broadband Internet that

preclude this extreme level of openness. Policy makers should be skeptical of these claims. If the debate over open access to the broadband Internet has proven anything, it has shown that one person's technical limitation is another's anticompetitive barrier to entry. Cable systems in other countries (e.g. Canada, Australia and Panama) have demonstrated the feasibility of open access. However, to the extent that there are technical limitations, the correct public policy response should be to:

- Actively work to minimize the technical limitations on access, proactively manage any limitations so as to impose the least restriction possible on open Internet communications, and prevent commercial interests from embedding and increasing technical limitations through network design decisions.

D. OPTIONAL PROPRIETARY ACCESS IS INADEQUATE TO PROTECT THE PUBLIC INTEREST

The word "any" used in the context of open access is very powerful. Once a network owner invokes proprietary control over the network in access negotiations, a host of problems arise.

1. POLICY AND ENFORCEMENT: WHAT COMMUNICATIONS NETWORKS REQUIRE TO REMAIN OPEN

Under the voluntary approach now espoused by AT&T and AOL Time Warner, there is no unbiased dispute resolution mechanism. If discrimination occurs in implementation, there is nothing that private parties or government entities can do about it, except, perhaps, file an antitrust case. Public policy should start with a ban on discrimination.

The Any Principle: *Network owners shall provide any requesting Internet Service Provider access to its broadband Internet transport services (unbundled from the provision of content) on rates, terms and conditions that are at least as favorable as those on which it provides such access to itself, to its affiliates, or to any other person.*

How many ISPs will be allowed access? AOL Time Warner will not commit to a number. AT&T has said that it will make access available to the five or six largest commercial ISPs in an area. These commitments do not even begin to deliver the competition and diversity that we enjoy on the narrowband Internet.

Competition: *The network operator shall support as many ISPs as technically possible and shall commit to the research, development and deployment of technologies to maximize the functionalities available and the number of ISPs that can be supported by the network.*

The type of ISPs that can gain access is also important. Once one abandons the "any ISP" principle, the question of which services will be able to gain access to the network on commercial terms (not just because of discrimination) also becomes a concern. Therefore, open access policy should make a broader commitment to diversity and discourse.

Diversity: The network operator should ensure that at least one unrestricted ISP is available on its network and shall endeavor to make access for local and noncommercial ISPs available in proportion to network capacity.

How do we police the offer of rates, terms and conditions? Since these are private negotiations, no unaffiliated ISP has any idea of what has been offered to any other ISP. How

does any ISP know that the offer it has been made is not discriminatory? How does an ISP enforce its rights, if nondiscriminatory terms are offered but not delivered?

Legal Rights*: Any ISP should have an enforceable right of action to seek injunctive relief from discrimination.*

Governmental Rights: *Government agencies (antitrust, regulatory) should have a right to prevent discrimination on their own motion.*

2. ARCHITECTURE: AVOIDING TECHNOLOGY BIAS

If there are technical limitations, who decides what they are and how do we monitor their implementation? For example, AOL Time Warner commits to allowing streaming video. What happens if it determines that only one video stream is possible and AOL Time Warner's affiliate got there first? A "technical limitation" may eliminate choice for consumers and act in favor of the AOL Time Warner affiliate. However, to the extent that there are legitimate technical limitations, the correct public policy response should be as noted above.

Minimizing technical limitations: *Network owners should actively work to minimize the technical limitations on access and proactively manage any limitations so as to impose the least restriction possible on open Internet communications.*

Technical Neutrality*: (1) Technical limitations must be demonstrated by some agreed upon standard. (2) Implementation of measures deemed necessary to enforce technical limitations should not discriminate between affiliated and nonaffiliated ISPs.*

In order to ensure technological non-discrimination a number of principles must govern the relationship of the ISP to the network owner.

Comparably efficient interconnection*: In providing non-discriminatory access, network owners must allow competitors to access their broadband distribution network in the most efficient manner possible on terms that are technically and economically equivalent to those provided by the network owner to itself or affiliates or partners in terms of scope, quality and price including a physical connection at any place where a cable company exchanges consumer data with any Internet service provider, or at any other technically feasible point selected by the requesting Internet service provider.*

Non-discriminatory change management: *To the extent that standards are developed for interfacing with broadband access services, the network owners should not be permitted to implement any non-standard, proprietary interfaces and any new network or operational interface that is implemented should be made available on a timely, non-discriminatory basis.*

Access to infrastructure: *It is vital to ensure that unaffiliated ISPs can deploy and gain access comparable to that the network owners afford to their affiliated ISP.*

Operational support and operating support systems*: Non-discriminatory access for multiple ISPs extends to all relevant aspects of the technical and operational infrastructure, so that all business system interfaces will be open to all ISPs and performance levels will not favor the affiliated ISP. The cable operator must provide equal treatment for local content serving (caching or replication) that the affiliated and nonaffiliated ISPs can provide, specifically, no firewalls, protocol masking, extra routing delays or bandwidth restrictions may be imposed in a discriminatory manner.*

3. NORMS: SERVICE RESTRICTIONS PROVIDERS/CONSUMERS

AOL Time Warner adopts a narrow definition of discrimination that identifies affiliation and one functionality (streaming video) as a criteria that will not be the basis for discrimination. AT&T gives no assurances about any specific characteristics. The "any ISP" principle of the narrowband Internet affords much broader protection against discrimination.

Protected Characteristics: *The network owner should place no limits on or provide favorable treatment to ISPs--based on affiliation, content, applications, functionality or type--in making service available to users or in allowing users to reach the Internet.*

Both the AT&T and the AOL Time Warner commitment open the door to market foreclosure based on permissible (not "undue") discrimination. How much "due" discrimination will be tolerated? Will ISPs be able to find rates terms and conditions that suit their needs, or will AT&T/AOL Time Warner only make a very restricted set available? If the affiliated ISP does not need certain speeds, or tiers of service, then AOL can meet its non-discrimination pledge by simply not making them available to anyone.

Availability: *Network owners should make access available on a variety of terms and conditions to meet the needs of ISPs of different types who have different needs for interconnection.*

4. BUSINESS LEVERAGE

Open access cannot ignore business reality. If the network owner inserts himself in the relationship between the customer and the independent ISP in such a way as to ensure that

its affiliated ISP has a price, product or customer care advantage, then competition between ISPs will be undermined.

Control of information is vital to the marketing of services.

Confidential treatment of information*: Broadband access providers that are affiliated with or have joint marketing arrangements with broadband service providers should also be required to enter into non-disclosure agreements.*

By controlling a bottleneck, network owners can place price conditions on independent content providers that undermine their ability to compete. Both AOL and AT&T have offered to allow consumers to purchase service from unaffiliated ISPs without paying for the affiliated ISP, other cable operators have not and pricing principles for network access for unaffiliated ISPs has not been addressed in detail. Price squeeze is still a distinct threat.

Paying once for service: *Pricing must allow the consumer to choose any ISP they want without being required to pay for or go through the cable-affiliated ISP.*

AOL Time Warner agrees to allow unaffiliated ISPs to purchase services without a direct commercial relationship. AT&T appears unwilling to do so.

Commercial transport service: *Network owners should provide "broadband Internet access transport services"--which is the transmission of data between a user and his Internet service provider's point of interconnection with the broadband Internet access transport provider's facilities--on rates that prevent vertically-integrated access providers from engaging in predatory pricing or cross-subsidization of their affiliated ISP.*

Bundling of services raises concerns because it provides a great deal of leverage, especially where monopoly services are bundled with competitive services. Because cable companies exercise control over bottleneck facilities and video programming, they have both he incentive and the opportunity to bundle these facilities with their other services and offer the entire package to their customers for a single price.

Unbundling: *Unaffiliated content providers should be allowed to resell (and therefore bundle) the cable programming--i.e., to create a complete bundle.*

Prohibition on cross-subsidy: *The bundled service must cover its cost.*

Critical aspects of the customer relationship must be controlled by Internet service providers including marketing, billing and boot screen customization. The importance of controlling the boot screen is becoming better understood as the information age unfolds. The network owner can control the boot screen that the subscriber sees which creates the potential to steer customers. The initial boot screen is like prime real estate and advertising space. Location on the initial screen can predispose customers to use affiliated services at the expense of unaffiliated services. AT&T insists that customization of the boot screen be negotiated, thereby retaining control over the independent ISP.

Wholesale relationship between the ISP and the Network Owner: *Network owners should enter into wholesale relationships with ISPs for the purposes of the sale of transport over the network and not interfere in the relationship between the customer and the unaffiliated ISP. By establishing this commercial relationship between ISP and the network owner, the network owner cannot dictate the relationship between the ISP and the customer*

including all the critical aspects of that relationship to the customer – billing, marketing, boot screen, etc.

Because of the substantial increase in horizontal and vertical concentration and the clear market power over essential functions and choke points in markets affected by the proposed AOL Time Warner merger, the FCC should reject or substantially restructure the transaction. By severing all ownership between AT&T and AOL Time Warner and imposing an enforceable and explicit open access requirement for Internet services, the FCC can reduce the public interest concerns with this transaction.

ANALYSIS

In this, as in all other Commission licensure proceedings, the merging parties must demonstrate that the merger will serve the public interest and necessity. *See* Communications Act of 1934, 47 USC §§214(a), 310(d) & 309(e); *Application of Tele-Communications, Inc. and AT&T Corp.*, 14 FCCRcd 3160, 3168-69 (1999) ("*ATT/TCI*"). In merger cases such as this, the public interest analysis goes beyond the traditional antitrust analysis employed by the Department of Justice and the federal Trade Commission; in addition to fostering competition, the Commission must strive to effectuate the purposes of the Communications Act. *ATT/TCI*, 14 FCCRcd at 3169.

In addition, the Commission has found that, in light of the general purpose of the Telecommunications Act to promote competition in the communications marketplace, merger applicants must demonstrate that merger will enhance competition, *i.e.*, that the benefits to competition outweigh the harms to competition posed by the enhancement of market power. *ATT/TCI*, 14 FCCRcd at 3168; *Application of Nynex Corporation and Bell Atlantic*

Corporation, 12 FCCRcd 19985, 19987 (1997) ("*Bell Atlantic/Nynex*"). Furthermore, the merger must not "impair[] this Commission's ability properly to establish and enforce those rules necessary to establish and maintain" competition. *Bell Atlantic/Nynex* 12 FCCRcd at 19987.

Finally, and most importantly, the Commission has long recognized that the public interest standard of the Communications Act and the First Amendment ***require the Commission to encourage diversity in the marketplace of ideas, and to take steps to insure that this diversity is not lost.***

As demonstrated below, the Applicants have failed to demonstrate that grant of the merger would serve the public interest. To the contrary, grant of the merger would produce unacceptable levels of concentration and market power in the relevant markets. This level of concentration would inhibit diversity in the marketplace of ideas, frustrate the development of competition in the Internet, cable, and cable programming markets, and make it impossible for the Commission to promote and enforce the pro-competitive purposes of the Communications Act.

I. INTRODUCTION

A. THE AT&T-AOL CROSS OWNERSHIP

Little has changed since CU, *et al.* submitted their initial analysis of the market structure problems posed by AT&T's ownership interest in Time Warner Entertainment, LP ("Time Warner" or "TWE") submitted in Docket No. 99-251. If, however, the Commission were to permit AT&T to acquire MediaOne Group, Inc. ("MediaOne") , as well as the acquisition here at issue, there would be a cross ownership interest between AT&T and AOL.[11] Our fundamental objection to any merger that allows AT&T to have any substantial, active ownership interest in AOL, Time Warner, or any of its subsidiaries is strengthened by the quickening pace of concentration in the industry. All of the reasons we have previously given for the Federal Communications Commission to force AT&T to sever its links to Time Warner apply to AOL.[12]

Because of the added dimension of narrowband market dominance, the need to sever those links is even stronger. In Section I of these comments, we focus on the unique vertical impact of the AOL Time Warner merger as it is compounded by the link to AT&T. We will not repeat the economic analysis presented in the AT&T-MediaOne merger.

2. OPEN ACCESS

The dominant position that this merger gives cable as the clear leader in broadband delivery technology also reinforces our conclusion that a clear public obligation to provide

[11] These concerns are in part described in CU, *et al.*'s *Motion to Consolidate Applications for Merger of AT&T/MediaOne with Applications for Merger of AOL/TW*, filed on April 11, 2000. CU, *et al.* have attached the *Motion* and incorporate herein both the request for consolidation and the specific concerns raised therein.

1. Consumer Federation of America, Consumers Union, and Media Access Project, *Breaking the Rules: AT&T's Attempt to Buy a National Monopoly in Cable TV and Broadband Internet Service*, August 17, 1999;

open access to cable-based broadband services is necessary to preserve an open Internet in this country. AOL was being counted on as the key player who could use its subscriber base in the residential sector of the narrowband Internet market to overcome the limitations of the telecommunications network as a high-speed medium and make it a reasonable competitor for cable-based broadband. The merger with Time Warner clearly indicates a shift in focus.

In section II of these comments CU, *et al.* demonstrate that without open access these two entities that dominate the cable industry -- AT&T and AOL -- will possess immense market power that poses a massive threat to the Internet. We also demonstrate that the voluntary commitments to provide commercial open access are totally inadequate to protect the public interest.

II. ANTICOMPETITIVE IMPACTS OF THE INTEGRATION OF AT&T AND AOL

A. A TIGHT OLIGOPOLY BECOMES A DUOPOLY

After almost nine months of intense scrutiny and concern about the impact of the proposed AT&T-MediaOne merger on the cable TV and broadband Internet marketplaces--scrutiny that centered on the cross-ownership of AT&T and Time Warner--the communications and video markets were stunned by the proposition of the largest corporate combination in history: America Online and Time Warner. This merger adds an entirely new and complex dimension to the industry structure analysis (see Exhibit II-1).

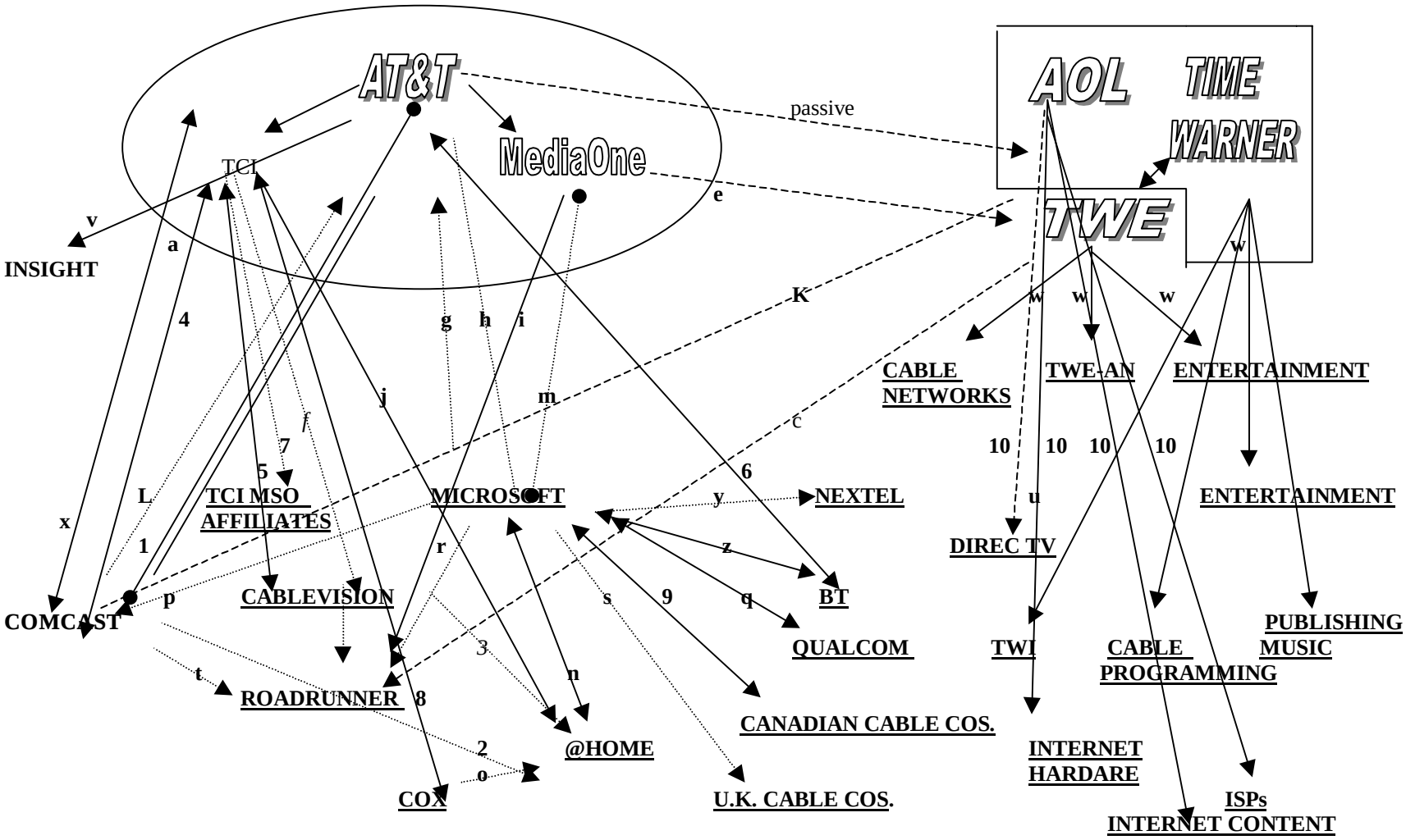
Consumer Federation of America and Consumer Action, *Transforming the Information Super Highway into a Private Tool Road: The Case Against Closed Access Broadband Internet Systems*, September 20, 1999.

- The AOL Time Warner merger extends the reach of two huge, vertically integrated firms across the cable TV, broadband Internet and narrowband Internets.
- It removes the most likely competitor for the still entrenched cable TV monopolists. By bringing AOL into the club of huge cable companies, it dramatically diminishes the likelihood that they will compete head-to-head with cable companies in the video programming market.
- By focussing the attention of the largest narrowband ISP on cable modem service as the delivery medium for the broadband Internet, it dramatically reduces the chance that telephone based DSL service will become a significant competitor for high-speed Internet service in the residential sector.
- The AOL Time Warner merger also raises a fundamental question about whether this new giant will be able to quickly capture the new product market for interactive TV.

In short, the AOL-Time Warner merger takes the concerns about the AT&T-MediaOne merger to higher levels. The ownership interest of AT&T in AOL Time Warner violates both the horizontal merger guidelines of the Department of Justice and the horizontal cross-ownership limits of the Federal Communications Commission (FCC) in a number of markets. Product extension and vertical integration into the narrowband Internet add to substantial concerns about the anticompetitive impact of this merger. It creates a duopoly that completely

EXHIBIT II-1

AN INTEGRATED DUOPOLY AT THE CORE OF AN EXPANDING BROADBAND CARTEL



LEGEND:
STOCK OWNERSHIP: MAJORITY ——▶ **; MINORITY** ····▶
JOINT VENTURE: ◀——▶
USE DEAL: EXCLUSIVE ——— **; PREFERRED** ·····
SWEETENERS: ●·····●

DESCRIPTIONS OF RELATIONSHIPS AND IDENTIFICATION OF SOURCES:

1 = $1.5 billion breakup fee (10)
2 = Large minority (12); 12% (16)
3 = Minority (6)
4= QVC Joint venture (16)
5 = Programming joint venture through Liberty (22); Investment (19)
6 = Joint venture (20)
7= TCI MSO Joint ventures (4)
8= Programming joint venture through Liberty (22)
9= Set top box joint venture (15)
10= Majority and minority ownership in various entities (26)

a = 10% Ownership of Time Warner (23)
b = exclusive deal for telephony (6)
c =25% (6)
d = exclusive deal for telephony (5)
e = 26% (1) (16)
f = 25% (1) (4)
g = 3% ownership (3) (5)
h = up to ten million set tops guaranteed (3)
i = Majority (5); 25% (6)
j = 39% (6)
k = 25% (6)
L= Exchange of systems is likely to be consummated with a stock swap (2)
m = Microsoft gets to buy MediaOne's European cable systems (9)
n = Windows NT in @Home solutions network (13)
o= Minority (6)
p = 11% ownership (5) (12)(17)
q = Wireless Internet (8)
r = Through Comcast (5)(12); Direct (18); 10% (16) (20)
s = 5% NTL, 30% Telewest, 30% Cable & Wireless (14)
t = Minority (5)(12)
u = small ownership (25)
v = 34% via MediaOne (1)
w = Cable systems are primarily owned in TWE; TBS is owned by Time Warner; Entertainment is split between Time Warner and TWE (24)
x = Manager of AT&T owned systems (7) (11)
y = 4% (8)
z = Wireless Internet (8)

SOURCES:

(1) "AT&T Household Reach to be Issue in MediaOne Merger Review," Communications Daily, May 10, 1999.
(2) "War Ends: AT&T and Comcast Cozy up in Solomon-Like Deal," Broadband Daily, May 5, 1999.

(3) "AT&T Comes Out on Top in Microsoft Deal," Broadband Daily, May 10, 1999.
(4) "FCC to Scrutinize AT&T MediaOne Deal," Broadband Daily, May 10, 1999.
(5) "AT&T Poised to Regain Long Reach, Via Cable," Washington Post, May 5, 1999.
(6) "AT&T Goes Cable Crazy," Fortune, May 24, 1999.
(7) AT&T Chief's $120 Billion Plan Capped by Deal for MediaOne," Washington Post, May 6, 1999.
(8) "Microsoft to Buy A Stake in Nextel," Washington Post, May 11, 1999.
(9) Allan Sloan, "AT&T-MediaOne Soap Opera Has Just About Everything," Washington Post, May 11, 1999.
(10) "Pact Ends MediaOne Bid War," Washington Post, May 6, 1999.
(11) "Comcast, in AT&T Accord, Abandons MediaOne Bid," Wall Street Journal, May 6, 1999.
(12) "As Worlds Collide, AT&T Grabs Power Seat," Wall Street Journal, May 6, 1999.
(13) "Microsoft, @Home Make Broadband Pact," ZDNet, May 13, 1999.
(14) "A Contest Is On In Britain to Revolutionize Cable TV," New York Times, May 13, 1999.
(15) "Rogers Communications and Microsoft Announce Agreements to Develop and Deploy Advanced Broadband Television Services in Canada," *Microsoft Presspass*, July 12, 1999.
(16) Schiesel, Seth, "Concerns Raised as AT&T Pursues a New Foothold, New York Times, May 6, 1999.
(17) Fabrikant, Geraldine and Seth Schiesel, "AT&T Is Seen Forging Link to Microsoft," New York Times, May 6, 1999.
(18) Markoff, John, "Microsoft Hunts Its Whale, the Digital Set-Top Box," New York Times, May 10, 19999.
(19) "ACTV Gets Boost from Liberty Digital," Broadband Daily, May 17, 1999.
(20) Wolk, Martin, "Microsoft Poised for Major Role in New Industry," Reuters, May 6, 1999.
(21) Fabrikant, Geraldine and Laura M. Holson, "Key to Deal for MediaOne: Keeping the Losing Bidder Happy," New York Times, May 6, 1999.
(22) Federal Communications Commission, In the Matter of Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming, CC Docket No. 98-102, Fifth Report, Table D-6.
(23) Federal Communications Commission, In the Matter of Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming, CC Docket No. 98-102, Fifth Report, Table D-1.
(24) "Transfer of Control Application," Transfer of Control of FCC Licenses MediaOne Group, Inc. to AT&T Corp., July 7, 1999.
(25) "Transfer of Control Application," Transfer of Control of Licenses Time Warner Inc. and America Online., to AOL Time Warner Inc., February 11, 2000.
(26) "The (World Wide) Web They Weave," *The Wall Street Journal*, April 3, 2000

dominates the Cable TV, broadband Internet and narrowband Internet landscapes. To the extent that a new market develops for interactive video programming, the wedding of these two giants—with their control over access to the cable broadband infrastructure and control of the world's largest narrowband subscriber base—gives them a chokehold on the future.

The concentration in the industry would be increased. AOL/Time Warner executives trumpeted the fact that the first call they made after announcing the merger was to AT&T CEO Michael Armstrong to offer to work together. In fact, AT&T already owns a sizeable portion of the new company through its substantial stake in Time Warner. These two companies would control over half of all cable lines in the country and half of the most popular cable programming. They would have over half of the narrowband Internet subscribers and three-quarters of all broadband Internet customers.

B. THE AOL TIME WARNER MERGER DRAMATICALLY ALTERS THE COMPETITIVE LANDSCAPE FOR FACILITIES AND CONTENT

The AOL/Time Warner merger makes the need for a clear public policy obligation for open access more pressing by reducing the prospect for cross technology competition. AOL had been a vigorous advocate of open access. Some were depending on AOL to use its strong position in the narrowband Internet market to propel DSL technology (which is behind cable technology and is considered less attractive for residential service), into a reasonably competitive position with cable. Unfortunately, with its acquisition of Time Warner, AOL changed sides. It dropped its support of an open access obligation and clearly shifted its focus to cable as the delivery medium for the next generation of Internet service.

More importantly, perhaps, the prospects for facilities-based competition are diminishing. The *Motley Fool* was the most optimistic about DSL among the market analysts.[13] Understanding the implications of AOL's purchase of Time Warner for that analysis gives the best understanding of how dramatically the field has tilted toward cable. The report noted the advantages of cable-based broadband: "[C]able's advantages are many, including easy (for the consumer) installation and use, always-on access, megabit-speeds on both incoming and outgoing content, a reasonable installation price, and a monthly subscriber cost that averages about $40."[14] With these advantages, and the skillful execution of providing broadband access, "cable has quickly risen to command 90 percent of the broadband market. Slow from the gate, DSL is a distant second."[15] The report, however, concluded that "[e]ach technology will have a niche. Most analysts expect cable to be the leading consumer technology over the next five years, with DSL second with consumers and a leader with small and medium-sized businesses, and satellite third, with a relatively small market for many years."[16]

The Motley Fool ties the success of DSL to a decision by AOL—having been cut off from access to cable—to focus its broadband strategy on that technology, thereby using its brand name and marketing to drive residential subscription: "Superior technology can almost always be beaten by better branding, marketing, and distribution."[17] The fact that consumers use the brand they trust "puts AOL, and to the lesser extent, Excite@Home, in the sweet

13. *See* Nico Detourn, *Industry News: AT&T Reaches Out,* THE MOTLEY FOOL'S INTERNET REP., July 10, 1999, p. 11.
14. *Id.*
15. *Id.*
16. *Id.*,. 18.
17. *Id.*

spot."[18] Because @Home offers better performance at the lowest cost, it should dominate the cable market with AOL in the second place spot.[19]

While the analysis indicates that an aggressive sales campaign by AOL would help to balance the advantage of @Home, the *Motley Fool* leaves no doubt about the fact that open access would be better for all parties: "Excite@Home would be in a position to gain not only the customers that are already headed its way based on its brand, but also spill-over customers that it could lure from AOL. Meanwhile, AT&T would generate extra revenue from leasing lines."[20]

The *Motley Fool* recognizes that AOL has been forced to rely on DSL because it has been cut off from cable and is pressing for open access. Still, it believes that when AOL embraces DSL, it will be a "reasonable" competitor for cable. @Home still leads the cable-based market and it will be difficult for any other provider to take the lead: "

> . . . Excite@Home is now the best way to invest in cable Internet access—at least until a newcomer (and AOL is the only name that might be a threat) can challenge Excite@Home on its cable home front. This would require a competing company to not only get cable access, but to achieve rapid subscriber growth—more rapid than Excite@Home. Every passing day that this does not happen only improves Excite@Home's position.[21]

Removing AOL as a driver of DSL will force the less preferable technology to fight an uphill battle against the marketing clout of the dominant narrowband ISP. There can no longer be any doubt that cable is the dominant medium for the delivery of broadband Internet services and likely to remain so for the foreseeable future.

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18. *Id.*
19. *Id.*
20. *Id*, p. 19.
21. *Id.*, p. 12.

> The combination further emphasizes: 1) the strategic value of cable plant as AOL is the fourth major strategic investor in cable (behind Microsoft, Paul Allen, and AT&T). AOL, in our view, had appropriate capital to buy anything including an RBOC or DBS operator, but chose cable, a significant endorsement of this platform.[22]

In addition to its horizontal power through cable system ownership, AOL Time Warner will have substantial market power in the video and Internet access markets. AOL Time Warner will possess an enormous stockpile of popular television channels (approximately one-half of the of the 20 most popular cable networks) and other valuable content (e.g., 33 magazines, 10% of the nation's books, one-sixth of the domestic record market, one-fifth of domestic movie production). This will be combined with AOL, @Home and Roadrunner Internet services (more than three-fourths of the U.S. broadband internet business and more than one-half of the narrowband business) that are distributed on affiliated cable television distribution systems. As a result, AOL Time Warner will be in a position to dominate the new consumer market for combined services.

The unique combination provides AOL Time Warner with immense economies of scale and scope,[23] but their content market power goes well beyond these basic economic

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22. Merrill Lynch, *AOL Time Warner: You've Got Upside*, February 23, 2000, p. 9

23. Goldman Sachs, *America Online/ Time Warner: Perfect Time-ing*, March 10, 2000, p. 10,

> AOL Time Warner is uniquely positioned against its competitors from both technology and media perspectives to make the interactive opportunity a reality. **This multiplatform scale is particularly important from a pricing perspective, since it will permit the new company to offer more compelling and cost effective pricing bundles and options than its competitors.** Furthermore, AOL Time Warner will benefit from a wider global footprint than its competitors.

Paine Webber, *AOL Time Warner: Among the World's Most Valuable Brands*, March 1, 2000, p. 6,

> Equally important to the new combination is the ability to take advantage of scale. First-to-market is great, but the critical problem is to take a great idea and bring it to scale; for only then can accelerating cash flows be realized in a highly competitive, price sensitive market. Herein lies the real power of the proposed merger: Each of the business divisions of both

factors. Closed proprietary products such as e-mail, instant messaging, buddy lists, calendar management and keyword search engines, have become the basic utilities of Internet communications and usage.[24] Consumers hesitate to give these up, since changing ISPs requires significant changes in identification (e-mail address), cuts the consumer off from communities of interest (IM and buddy lists), or requires significant learning costs (new keyword searches and calendar management routines).[25] These interfaces are the sticky features that glue the customer to the service provider.[26] Leveraging these Internet utility

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companies – whether online subscribers, television networks, music, film, magazines or cable systems – has achieved the number one or two market share position in each of the arenas in which it competes.

24. Merrill Lynch, p. 22,

    AOL's most valuable asset has always been its interactive relationship with its customers. As the online medium moves beyond simple communication and information gathering tools, and users integrate it more deeply into their lives, this "interface" relationship becomes more and more valuable. For advanced users, AOL and/or the Internet have already become the platform through which they manage ("operate") multiple daily activities, including communications with family, friends and business associates, calendar and address book, news and information sources, photo delivery and archives, personal and family finances, homework, research, and shopping. Far from being passive "entertainment," which most people would like more of but could do without, these activities are as central to average daily life as eating and sleeping. AOL is gradually becoming the platform through or on which a majority of them happen.

    Goldman Sachs, p. 16,

    At the same time, the focus is on extending AOL habits to TV, especially in the area of communications, which continues to be the bedrock of AOL's core service today (email, chat, message boards, and instant messaging). The hope would be that his makes **AOL TV viewers stickier than with other forms of interactive TV, because while everyone else can offer the same technical functionality, only AOL can offer the huge amount of traffic and community important around the communications aspect of the platform.**

25. Merrill Lynch, p. 32,

    We think another benefit of services like AOL TV is increased member lock-in and increased share of "media Time." The more ways a subscriber interacts with AOL, in our opinion, the less likely the subscriber will be to pull up the stakes and go with a different provider – especially when the entire family has programmed the service with individual buddy lists, calendars, and email accounts. Once an AOL user can interact with AOL on devices besides the computer, moreover, we believe it is likely that the user will increase the amount of time he or she spends using AOL – which should lead to increased revenue opportunities for AOL and, consequently, decreased opportunities for media companies.

26. Merrill Lynch, p. 2,

functions of AOL, the new entity will be able to bundle in a variety of proprietary Time Warner products (e.g. Time Warner cable programming, entertainment and music), as well as other products (e.g. telephone service).[27]

This domination will be built upon the combination of integrated, facility content ownership and proprietary products that lock-in customers.[28] Controlling both content and

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> We believe that the company will continue to benefit from what we might call "operating system" qualities, in that it dominates ownership of the most important interface in the consumer interactive services industry – the one between the consumer and the interactive world. In time, this interface should become ubiquitous across all devices.

27. Goldman Sachs, p. 16… 17,

> Given that the functionality in these boxes can far exceed enhanced TV functionality like offering home telephony services, and the ability to play or route music to a consumer's stereo system, we view the AOL TV to likely be a misnomer over time, given its substantially broadened applications…
>
> **We believe the real value by consumers en masse will be not in the "broadband connection" per se, but rather an attractively packaged, priced, and easy-to-use service that will bundle broadband content as an integral part of the service.**

28. Merrill Lynch, pp. 10…11,

> For example, over the next several years, cable assets are likely to critical to the development of both broadband PC-based internet services such as music downloading and streaming audio and video, as well as interactive television. As an owner of major cable assets *and* content assets, AOL Time Warner will be in an excellent position to drive the development of new services.
>
> Above and beyond content and distribution, however, we believe that *the key competitive advantage the company will gain in the current market environment will stem from owning both the content and the distribution at this critical point in time.*
>
> Specifically, we believe that by owning both offline content and an online platform, as well as online content and an offline platform, the company is in a better position than either entity is separately to drive the evolution of interactive services to the next level – breaking the convergence logjams that, in many sectors of the media and communications industries, are inhibiting the growth of the medium.

Note that Merrill Lynch (p. 10) is ambivalent about whether open access will come about through the commercial means AOL has advocated

> From the Internet team's perspective (the Media team stridently disagrees with this hypothesis) moreover, in a world in which all cable systems eventually support open access for both television and internet content (a situation that seems likely to our Internet team and unlikely

distribution, the company can design interfaces that capture and hold customers, while they lock-out competitors, except on terms and conditions that are set by the entity controlling the choke point.

We cannot help but observe a chilling analogy that one Wall Street analysis drew between Microsoft's control of the PC software interface and AOL's control of the Internet interface.

> If you were to design a communications/media company from the ground up today, you would probably build a company that looked somewhat like AOL Time Warner. You would want to control the consumer interface (AOL) and then you would want to gradually mover deeper into the various chains, in the same way Microsoft moved from the operating system into applications. By owning various platforms and content, you could accelerate the growth of these businesses by enhancing their integration with your interface….
>
> More importantly, by owning the branded consumer interface, the "front screen" around which consumers organize their entertainment, information and communications activities, AOL Time Warner could have many of the same competitive advantages Microsoft has had in the PC market. [29]

The irony is that AOL is fighting several battles to preserve the closed nature of its interfaces (instant messaging keyword functions) and has been embroiled in a dispute about an upgrade that undermines the interoperability of competing services -- typically Microsofteque anticompetitive practices.

The new consumer market for interactive services may combine the strengths of the merging companies, without traditional public protections against monopolistic practices. For example, AOLTV involves the combination of television programming and split-screen functionality to access Internet services through cable television transmission using a remote

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> to our Media team), there might be no longer any reason for AOL Time Warner to be in the pipe-installation-and-maintenance segment of the business.

control device. With the simple "point and click" ease of channel surfing, consumers could select an AOL icon that opens the door to all AOL Internet services (on part of the screen) while simultaneously watching television. Despite enormous market power over the content of this new service, and the cable distribution systems that carry the service, it is unclear whether AOLTV would come under the cable programming nondiscrimination requirements of the 1992 Cable Act, or even AOL Time Warner's open access promises.

C. THE AT&T AND AOL DEALS HAVE A PERVASIVE IMPACT ON INDUSTRY STRUCTURE

The emerging AT&T-AOL duopoly has a pervasive impact across several markets and involves four different aspects of market structure: (1) horizontal concentration; (2) vertical integration; (3) market extension, and (4) product extension. Exhibit I-1 above depicts the various ownership, joint-venture, and leasing arrangements that constitute what can rightly be called a digital communications cartel.

The AT&T proposal to purchase MediaOne and the AOL Time Warner deal, as well as many prior and subsequent deals that have been struck with Comcast and Microsoft[30] result

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29. Merrill Lynch, p. 23.

30. There is some sense in which the side deals may have been necessary to preserve cooperative relations among the various companies, a source of concern itself. A *New York Times* ("Key to Deal for MediaOne: Keeping the Losing Bidder Happy," May 6, 1999, story describes the side deals as follows:

> Comcast had sought help from Microsoft the previous week, hoping that the software giant would dig into its $22 billion cash coffer to aid the company in its bid. But even as Microsoft's chief financial officer, Gregory Maffei, met that week with Comcast at the offices of Sullivan & Cromwell, Microsoft's law firm, the Comcast team knew that Microsoft representatives were simultaneously meeting with its rival, AT&T, indicating that Microsoft might only be using the talks with Comcast as leverage in the AT&T negotiations…
>
> But AT&T executives also knew it was wiser to strike a friendly deal with the cable operator with which it hoped to do business in the future…

not only in a huge financial transaction but one that contains elements of every type of merger.

- As described in Exhibit II-2, the horizontal aspects of these mergers involve mergers between cable distribution systems (to the extent that they do or can compete in regional and national markets). The horizontal aspects also involve concentration of cable programming (to the extent that programs compete to gain access to customers) and concentration of broadband Internet programming (to the extent that @Home and RoadRunner sell the same thing to the public, or that narrowband competes with broadband). AOL time Warner also involves an inappropriate ownership relationship between the second largest cable television company and its direct competitor, satellite provider DirecTV.

The vertical aspects of the merger involve the integration of programming and distribution. In cable, MediaOne's programming and distribution will be integrated with the previously acquired TCI programming and distribution. The merger integrates programming

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> Why was AT&T eager to be the industry goliath, willing to give up control of more than four million subscribers? Company executives did not talk publicly, but one person involved in the talks noted that it would behoove AT&T -- which is trying to offer local telephone service through alliances with cable companies – not to alienate Comcast. "Having Comcast, which control six million homes, or 10 percent of the cable industry, as an avowed enemy for life was not smart," said the participant on the condition of anonymity.

EXHIBIT II-2
MARKET STRUCTURE IMPACT OF THE AT&T-AOL DUOPOLY
ON THE CABLE TV, BROADBAND INTERNET AND NARROWBAND INTERNET

IMPACT	CABLE	BROADBAND NARROWBAND INTERNET
HORIZONAL CONCENTRATION		
Distribution	TCI / MediaOne,	TCI / MediaOne
Increases in concentration	HHI: 1225 – 2267	HHI: 854-1584
	AOL-Direc TV	
Size conveys monopsony power	50% of market	70% of market
Programming	TCI / TWE / MediaOne	@Home / RoadR
Increase in concentration	HHI: 1301 – 2474	HHI: 2425 – 4489
Size conveys monopsony power,	~50% of market	~90% of market
scale forecloses competition		AOL-TW
		Broadband /
		Narrowband
VERTICAL INTEGRATION		
Programming / Distribution	TCI / AOL / TWE / MediaOne	@Home / RoadR
Cross subsidy, discrimination		Private Regulation
Price squeeze problems		Content x-subsidy
Loss of important potential entrants		Bandwidth limit
		Routing control
		Buy-through rqt.
Distribution / Exhibition	AT&T / Microsoft	
Cross subsidy, discrimination	AOL / TW	
Financial Size and Control	AT&T / Microsoft / AOL / TW = huge market cap	
Entry on multi-market, Multiproduct scale	Cable / Broadband / Narrowband	
CONGLOMERATION		
Market Extension	Cable Coverage	Internet Coverage
National coverage and regional domination become so great that entry is made more difficult		
Product Extension	Cable / Broadband Bundling / Narrowband	
Multi-product entry becomes necessary, bundling becomes a barrier to entry.	Loss of streaming video alternative	

and distribution services massively in narrowband (by linking AOL and Time Warner) and significantly in broadband (to the extent that @Home and RoadRunner are not currently integrated with a much larger distribution network). The vertical aspects also involve the integration of distribution and equipment (the design and operation of the set top box by programming and distribution entities), through the AT&T deal with Microsoft, and the AOL Time Warner merger (to the extent that AOL has made forays into equipment, which will now be integrated with Time Warner's distribution).

To the extent that distribution is considered a local market, the AT&T-MediaOne merger constitutes market-extension, since much greater coverage is achieved. To the extent that the purpose of the AT&T-MediaOne merger is to utilize the broadband network to distribute cable, Internet and telephone service, it constitutes product-extension. The AOL Time Warner merger is primarily a product extension merger, integrating Time Warner's broadband content and distribution into AOL's narrowband subscriber base.

D. SPECFIC VERTICAL PROBLEMS

Economic and antitrust policy has generally been most adverse to horizontal mergers and least adverse to conglomerates, but it can, under certain circumstances, find fault with a merger that involves any one of the above areas. Needless to say, mergers that involve several of these areas, not to mention all four, should be subject to extremely close scrutiny. Although the literature is generally more ambivalent about the impact of vertical integration, it is unequivocal that where dominant firms merge in concentrated markets, vertical integration through merger is likely to harm competition and hurt the public. When markets

are concentrated and dominant firms are involved, the market structural conditions that allow firms to exercise market power exist.

1. BARRIERS TO ENTRY

Vertical integration through merger can create barriers to entry. By integrating across stages of production, incumbents may force potential competitors to enter at both stages, making competition much less likely. These barriers take a variety of forms. The AOL Time Warner merger clearly creates this problem. Integration between AT&T and AOL compounds fundamental vertical integration problems in the industry.

> [V]ertical mergers may enhance barriers to entry into the primary industry if entrants must operate at both stages in order to be competitive with existing firms and if entry at both stages is substantially more difficult than entry at one stage.[31]

Backward integration by a dominant manufacturer may also create a barrier to entry so as to preserve its dominance. One of the most obvious and important barriers to entry is the high capital outlay necessary to enter a vertically integrated industries.

> Bain popularized the concept of barriers to entry and also discussed the importance of potential competition. Bain argued that vertical integration creates a capital barrier to entry by forcing potential entrant to contemplate entry at two stages of production rather than just one.[32] To avoid these hazards, firms entering either of the markets in question might feel compelled to enter both, increasing the amount of capital investment required for entry.[33]

The emphasis on capital markets in the above discussions of barriers to entry is appropriate to this merger. The four dominant firms in the conglomerate -- AT&T, AOL, Time Warner, and Microsoft ranked 10, 19, 26 and 1 in terms of market valuation. The total

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31. Perry, Martin K., "Vertical Integration: Determinants and Effects," in Richard Schmalensee and Robert D. Willig (Eds), *Handbook of Industrial Organization* (North Holland, Amsterdam: 1989), p. 247.

32. Perry, p. 197.

33. Scherer, F.M. and David Ross, *Industrial Market Structure and Economic Performance* (Houghton Mifflin, Boston: 1990), p. 526.

in capital of these four companies would be almost a trillion dollars. Other players in the cable TV and Broadband Internet markets come nowhere near this size. The largest programmer, Disney, ranks 36th, less than half the size of AT&T alone. No other cable operator even comes close.

2. FORECLOSURE OF INPUTS

Capital market hurdles are only one of the barriers that vertical integration and conglomeration can create to entry. Such mergers can also foreclose input markets to competitors.

> When all production at a level of an industry is "in-house," no market at all exists from which independent firms can buy inputs. If they face impediments or delays in setting up a new supplier, competition at their level will be reduced. The clearest form of this is the rise in capital a new entrant needs to set up at both levels.[34]

> Ores, special locations, or other indispensable inputs may be held by the integrated firm and withheld from others. The integration prevents the inputs from being offered in a market, and so outsiders are excluded. A rational integrated firm might choose to sell them at a sufficiently high price.[35]

Preferential or exclusive dealings create yet another barrier to entry. As part of the transaction, AT&T has inherited and entered into a series of exclusive and preferential deals for the use of facilities and products. AOL inherited a set of exclusive deals as well. Given the size of the parties and the nature of the market and their hold on key inputs, this is anticompetitive.

> The first firms to integrate into neighboring stages reduce the number of alternative sources for other firms at either stage. This "thinning" of the market can increase the costs of market or contractual exchange. Subsequent integration by other firms then becomes more likely.[36]

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34. Shepherd, William G., *The Economics of Industrial Organization* (Prentice Hall, Englewood Cliffs: 1985), pp. 289-290.

35. Shepherd, p. 290.

36. Perry, p. 247.

> Restrictions may be set on areas, prices or other dimension … Only when they are done by small-share firms may competition be increased. When done by leading firms with market shares above 20 percent, the restrictions do *reduce* competition.[37]
>
> Similarly, a dominant firm may also use vertical integration to raise the costs of its competitors … By leaving the open market thin, competitors may be unable to expand without significantly driving up the input price, they may be subject to higher prices set by the fewer remaining suppliers, or they may incur higher transaction costs for having to negotiate contracts with suppliers …[38]

The focal point of concern about vertical integration in the cable industry has been the link between cable programming and cable systems. As noted, the major MSOs involved in the AT&T and AOL deals are also the largest programmers.

There is a long history of complaints about denial of access to subscribers by integrated MSOs and preferential access for affiliated programming. Evidence of these problems is both qualitative and quantitative.[39] The dominant, integrated firms get the best deals. One problem comes from most favored nation clauses that large operators often secure from programmers. Such clauses are supposed to guarantee an MSO of getting as good a price as any other operator, sometimes excluding Time Warner and TCI.[40]

Efforts to impose or obtain exclusive arrangements have become ever-present controversies in the industry, including efforts to prevent competing technologies from obtaining programming, as well as to prevent competition from developing within the cable industry.[41] Price discrimination against competitors and other strategies, such as placing

37. Shepherd, p. 294.

38. Perry, p. 197.

39. Ahn, Hoekyun and Barry R. Litman, "Vertical Integration and Consumer Welfare in the Cable Industry," *Journal of Broadcasting and Electronic Media*, 41.

40. McAdams, John M. Higgins, "Hangover from Takeovers," *Broadcasting & Cable*, April 19, 1999.

41. HBO, a subsidiary of Time, played a key role in the effort to prevent TVRO operators from obtaining programming (see Chan-Olmsted, op. cit., at 11), and the effort to sell overbuild insurance (Competitive Issues in the Cable Television on Industry, Subcommittee on Antitrust, Monopolies and Business Rights, Committee on

programming of competitors at a disadvantageous position on the dial, have also been evident in recent years.[42]

The landscape of the cable industry is littered with examples of these anti-competitive practices. These include, for example, exclusive deals with independents that freeze-out overbuilders,[43] refusals to deal for programming due to loopholes in the law requiring non-discriminatory access to programming,[44] tying arrangements,[45] and denial of access to facilities.[46]

3. POTENTIAL COMPETITION

The mergers and related deals remove several of the most important potential entrants across a number of markets and stages of production.

> Potential competition may be important for some markets. If one such potential entrant merges with a firm already inside the market, the ranks of actual plus potential competitors are reduced by one. Unless the entrant is in a vertical relation, the conglomerate reduces the total degree of competitive constraint, even if only slightly.[47]

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the Judiciary, United States Congress, March 17, 1988, at 127, 152-174. The current efforts to impose exclusive arrangements have raised numerous complaints from potential competitors (see for example "Statement of William Reddersen on Behalf of Bell South Enterprises (hereafter, Bell South)," and "Testimony of Deborah L. Lenart on Behalf of Ameritech (hereafter, Ameritech)," Subcommittee on Telecommunications, Trade and Consumer Protection, Committee on Commerce, U.S. House of Representatives, July 29, 1997.

42. Competitive Issues in the Cable Television Industry, Subcommittee on Antitrust, Monopolies and Business Rights, Committee on the Judiciary, United States Congress, March 17, 1988. More recently, for example, The Time Warner-Turner merger as originally proposed included preferential treatment for TCI (see "Separate Statement of Chairman Pitofsky and Commissioners Steiger and Varney," In the Matter of Time Warner, File No. 961-0004. Efforts to exclude non-affiliated programs have also been in evidence, as Viacom's most popular programming (MTV) has been bumped.

43. Bell South (p. 4) cites examples of suspected exclusive arrangements involving Eye on People, MSNBC, Viacom, and Fox, as does Ameritech (p. 7).

44. The loophole will be terrestrial transmission to regional clusters, thereby avoiding the requirement to provide non-discriminatory access to satellite delivered programming. Bell South gives examples of Comcast in Philadelphia and Time Warner in Orlando (p. 5). Ameritech cites Cablevision in New York (p. 8). A similar process seems to be developing in Detroit.

45. Bell South gives examples including NBC/CNBC, Scripps Howard/Home and Garden (p. 5).

46. Testimony of Michael J. Mahoney on Behalf of C-TEC Corporation Subcommittee on Telecommunications, Trade and Consumer Protection, Committee on Commerce, U.S. House of Representatives, July 29, 1997.

47. Shepherd, p. 303.

> In addition, [Bain] pointed out that vertical merger also eliminated one of the most natural potential entrants into each stage. Indeed, these two theories are complements. It is difficult to argue that firms in neighboring stages are the most likely entrants without also believing that entry at both stages is more difficult than entry at one stage.[48]

The obvious implication of the AT&T and AOL deals is that there are fewer competitors to enter each of these markets. AT&T, MediaOne, AOL, Time Warner should have been and were entering these markets separately. As noted previously, AT&T had contemplated entry through new facilities, rather than by the purchase of existing players.

The issue here is not simply size or vertical integration, as such, but size and vertical integration through merger. If AT&T of AOL had increased their size or effectuated this integration through expansion into new areas, there would be no debate about their actions. The merger literature places considerable importance on the decision to attack markets through merger, rather than expansion.

> [V]ertical merger may have an adverse competitive impact by eliminating specific potential entrants who could integrate by vertical expansion rather than merger.[49]

In this case, the fact that AT&T and AOL have chosen the merger route takes on even greater significance because they both contemplated other routes. They were self-declared competitors whose decision to buy rather than fight is especially troubling.

AT&T announced at least two other decisions to follow a market expansion path to increasing its size and scope of activities, but it abandoned these approaches.[50] It now claims that other companies can and should take the expansion route, which it rejected. It is ironic that AT&T now claims that its effort to achieve vertical integration through merger should be

48. Perry, p. 197.
49. Perry, p. 247.
50. Ironically, one of the technologies AT&T abandoned – wireless loop – is one it claims will be a

allowed because other firms can accomplish the same thing through expansion that AT&T could not. If AT&T could not expand into these fields when they were not dominated by one huge, vertically integrated firm, it is hard to see how smaller rivals can overcome a larger obstacle. We have already noted the important role that AOL had played as a new entrant into the broadband market and the impact that its loss will have on that market.

The powerful influence of these extremely large entities over the broadband Internet is clear.[51] There is both a local and national dimension to Cable's power in the market for Internet access. At the local level, Cable providers have substantial market power in the broadband access and broadband service provision, because the Cable franchisee, whether it be AT&T or anyone else, has a complete monopoly over the Cable infrastructure as there have been virtually no cable overbuilds in this country. Local franchises, moreover, only come up for renegotiation episodically or with a change of ownership, further reinforcing Cable's local monopoly power. At the national level, AT&T represents a particularly significant case, because it has become the largest national Cable provider with a position in a majority of local markets. As a result of its recent acquisitions, AT&T now controls the majority of the U.S. cable television infrastructure. Thus, AT&T now has substantial market power over large sections of the present narrowband and future broadband Internets, and will consequently have a profound impact on the Internet's third phase. This share gives it significant influence, beyond the sheer market power indicated by the number of homes passed by a cable system in which AT&T has a significant ownership stake. Indeed, it allows the company to coordinate the activities of many local monopolists and shape the overall

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competitor.

51. Francois Bar et al., Defending the Internet Revolution in the Broadband Era: When Doing Nothing is

network architecture and standards. At the moment, AT&T is building a vertical structure in partnership with Excite@Home. The risks and costs of permitting a closed vertical structure, one tied to a single ISP that locks out others, would be the same whomever AT&T might choose as a partner.

Permitting a single company to leverage its market power in pursuit of only the technology and service trajectories that serve its own commercial interests reverses three decades of policy moving toward openness. It will stifle the competition through the network structure that has fostered experimentation and user driven innovation. Yet, Cable providers, which have monopoly cable franchises in most markets, are achieving substantial market power over broadband Internet access.

There is another aspect to the loss of potential competition in these industries. Because the cable industry has not been competitive, the possibility that broadband Internet services could compete against cable TV offerings is particularly important. Allowing cable TV companies to dominate broadband Internet undermines that possibility.

Not surprisingly, one of the first steps taken by cable companies was to foreclose the possibility that streaming video would compete with cable TV. Cable TV operators restrict the amount or duration of streaming video that consumers may receive over the broadband Internet. Unlike the relatively poor-quality streaming video over a common telephone modem connection, broadband-streaming video actually can give regular cable TV a run for the money. Unrestricted and open broadband Internet service could potentially compete against cable TV -- by streaming full video programming to consumers. The private regulation of

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Doing Harm, (August 1999).

broadband access imposes restrictions to ensure that broadband Internet services will not undermine the cable TV monopoly.

For analysts concerned with the issue of concentration and control in the industry, the loss of potential competition is a paramount concern.[52]

> The first is the cost of losing ISP competition. As we have argued, one should not think of ISPs as providing a fixed and immutable set of services. Right now ISPs typically provide customer support, as well as an IP address that channels the customer's data. Competition among ISPs focuses on access speed, as well as some competition for content. (55)
>
> The architecture proposed by AT&T/MediaOne for their broadband cable service threatens this vertical competition. By bundling ISP service with access, and by not permitting users to select another ISP, the architecture removes ISP competition within the residential broadband cable market. By removing this competition, the architecture removes an important threat to any strategic behavior that AT&T might engage in once a merger is complete. The architecture thus represents a significant change from the existing End-to-End design for a crucial segment of the residential Internet market. Further, there is in principle no limit to what AT&T could bundle into its control of the network. As ISPs expand beyond the functions they have traditionally performed, AT&T may be in a position to foreclose all competition in an increasing range of services provided over broadband lines. (51)
>
> AT&T and MediaOne would achieve this change by bundling technologically. The consequence of this bundling will be that there will be no effective competition among ISPs serving residential broadband cable. The range of services available to broadband cable users will be determined by one of two ISPs — @Home and RoadRunner, both of whom would be allied with the same company. These ISPs will control the kind of use that customers might make of their broadband access. They will determine whether, for example, full length streaming video is permitted (presently it is not); they will determine whether customers might resell broadband services (as they presently may not); it will determine whether broadband customers might become providers of web content (as they presently may not). These ISPs will have the power to discriminate in the choice of Internet services they allow, and customers who want broadband access will have to accept their choice. Giving this

52. "Written Ex Parte of Professor Mark A. Lemley and Professor Lawrence Lessig," *In the Matter of Application for Consent to the Transfer of Control of Licenses MediaOne Group, Inc. to AT&T Corp*, Federal Communications Commission, CS Docket No. C99-251 (hereafter Lemley and Lessig, numbers in parentheses indicate paragraph numbers).

> power to discriminate to the owner of the actual network wires is fundamentally inconsistent with End-to-End design. (52)

One of the most troubling areas of lost potential competition is for the core monopoly service of the cable TV industry, video programming.[53]

> The second cost is the risk that legacy business models will improperly affect the architecture of the net. Broadband is a potential competitor to traditional cable video services. Traditional cable providers might well view this competition as a long term threat to their business model, and they may not want to change to face that competitive threat. By gaining control over the network architecture, however, cable providers are in a position to affect the development of the architecture so as to minimize the threat of broadband to their own video market. For example, a broadband cable provider that has control over the ISPs its customers use might be expected to restrict customers' access to streaming video from competitive content sources, in order to preserve its market of traditional cable video. (58)

The addition of high priced broadband Internet services will do nothing to change this picture. In fact, it will likely make matters worse. By adding services at the high end, cable operators will be able to attack the high-end niche that satellite occupies. Yet, satellite's high costs prevent it from attacking the cable base. If the AT&T strategy moves forward, we would expect even less market discipline to be placed on cable for its base market.

The final behavioral effect is to trigger a rush to integrate and concentrate. Being a small independent at any stage renders the company extremely vulnerable to a variety of attacks. This process clearly plagues the industry. Severing the link between AT&T and AOL would at least separate the two dominant entities in the industry.

> It is possible that business firms undertake vertical integration mergers not to enhance the level of monopoly power at some stage, but to redistribute it. Oligopolies often settle down into behavioral patterns in which price competition atrophies, even though some or all sellers suffer from excess capacity. Non-price rivalry then becomes crucial to the distribution of sales. One form of nonprice competition is the acquisition of downstream enterprises which, all else (such as prices) being equal, will purchase from their upstream affiliates. If acquisition of

53. Lemley and Lessig.

> this sort deflects significant amounts of sales, disadvantaged rivals are apt to acquire other potential customers in self-defense, and reciprocal fear of foreclosure precipitates a bandwagon effect in which the remaining independent downstream enterprises are feverishly sought.[54]
>
> Triggering: If there are 10 nonintegrated firms and only one of them integrates, then little affect on competition might occur. But if this action induces the other 9 to do the same, the ultimate impact of the first "triggering" move may be large. Any increase in market power is magnified.[55]

4. MONOPSONY POWER

Another important aspect of the AT&T and AOL mergers and related deals is the issue of monopsony power. Monopsony is a situation in which "some buyer can perceptibly influence price."[56]

This topic is generally discussed under the broad category of vertical integration.[57] The issue is dealt with as an analysis of a large (or the sole) purchaser of an input or product at wholesale who can exercise bargaining power in the confrontation with suppliers who possess market power. The power of the buyer is said to countervail the power of the seller. This bilateral monopoly situation results in an improvement in consumer welfare under certain circumstances.

> Under what circumstances might countervailing power lead to still better results for the consumer? The answer must involve an asymmetry on the buyer's side: the buyer must be powerful enough to constrain the monopolistic seller's prices, but lack the power as a reseller to charge monopoly prices.[58]

54. Scherer and Ross, pp. 526-527.
55. Shepherd, p. 290.
56. Scherer and Ross, p. 17.
57. The major texts cited in this paper, Scherer and Ross, Shepherd and Perry all treat the issue in this context.
58. Scherer and Ross, p. 527.

The key to the outcome is "the absence or presence of power on the selling side of the market."[59] Our concern is that the very large size of the post-merger AT&T and AOL will give them a great deal of monopsony power in the programming market. Since it faces little competition in the MVPD market, price concessions are not passed through to consumers. Moreover, price discrimination is likely.[60]

D. CONCLUSION

The horizontal problems of AT&T-MediaOne and the vertical/conglomerate problems of AOL-Time Warner are severely compounded by the cross ownership of AT&T in AOL. The problems will not be eliminated by ending the cross ownership, but their impact would be reduced. Eliminating the cross ownership problem would create much greater balance in the capital size of the dominant firms. It would balance their assets (the cable, telephone would face the dominant Internet/content firm). Each would have incentive to bargain at arms length with the other. This more competitive dynamic would open the door to greater opportunity for firms not affiliated with the two dominant firms, especially if an open access requirement were imposed, as discussed in the next section.

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59. Scherer and Ross, p. 532.
60. Shepherd, p. 287, describes the situation as follows:

> It is from the final level that pressure may arise to hold the bilateral monopoly to competitive results.
>
> Bilateral oligopoly follows much the same lines as bilateral monopoly, but of course the effects are not as sharp or clear. Powerful buyers will not play off the sellers against each other, extracting low input prices. Some will threaten to integrate vertically. The sellers, from their viewpoint, will be charging "what the traffic will bear," in line with demand elasticities.
>
> The whole process breeds price discrimination… The net tendency toward restrictive or competitive results will still depend on the oligopsonists' status as *sellers*.

III. VERTICAL MARKET POWER IN NETWORK INDUSTRIES

A. THEORY VS. REALITY

One of the central issues in the debate over these mergers, whether it is in the conventional discussion of market power or the open access debate is whether vertically integrated companies will use their leverage over facilities to impede competition. Although most cable system owners have signed exclusive contracts with broadband ISPs, some have said they would not renew those contracts. Some analysts argue that it would not be in their economic interests to keep their systems closed to unaffiliated ISPs, but the vertically integrated firms have hesitated to commit to or define nondiscriminatory access.

The FCC has claimed that even though cable systems have the legal right to operate broadband Internet services on a closed, proprietary basis, it does not expect them actually to be operated on this basis.[61] It says that the market in high-speed Internet facilities will be

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61. *See* LEMLEY & LESSIG, p. 78.

> The FCC has not conducted a proceeding on the matter, which is a source of frustration for many of the local government entities involved in seeking to ensure open access. Instead, the FCC has relied on a series of statements and staff analyses by the Chairman and the staff of the Commission. The only context in which a policy has been considered in the broad sense, the section 706 proceeding *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans* (1998), leads to a striking contradiction.

Lemley and Lessig point out that the justification for not requiring open access to cable cannot simultaneously be the justification for requiring open access to DSL services. *See* LEMLEY & LESSIG, *supra* note 11, at 83.

> This is especially true for the FCC, because the FCC mandates that DSL offer broadband under what is described as an "open access" model. How it is possible that there is no concept of "open access" in the context of cable, but a concept of open access in the context of DSL, frankly baffles us. Certainly if the providers of DSL refused customers the choice of ISPs, and then cited the Bureau's findings as a defense to its actions, no court would recognize the lack of a definition as any excuse.
>
> Indeed, AT&T has argued vigorously in favor of imposing open access requirements on local telephone providers. Refer to the reply comments of AT&T, stating that "the most important action the Commission can take to speed deployment of advanced telecommunications services is to vigorously implement and enforce the market-opening obligations that Section 251 imposes on incumbent LECs."

sufficiently competitive to force them to open their networks up—even though they are not open today. Owners of facilities will be driven by their economic self-interest to let people speak and be heard and to allow content providers to move freely across their proprietary roads.

Others suggest that this theory is incorrect and that neither AT&T nor AOL are likely to make the concession necessary to open its network. In comments to the FCC, Lessig and Mark Lemley have made the point that there is no real reason to believe that the market will force network owners to open up.[62] Given the immense effort that AT&T has expended to defend the right to keep its network closed, such an outcome is hard to envision.

A debate has broken out at the FCC in the AT&T-MediaOne merger, which has direct relevance to the AOL Time Warner merger. Comments were filed at the FCC arguing Lemley and Lessig did not prove the empirical case that AT&T has or will have market power.[63] In addition, James Speta, author of this comment, argued that even if AT&T had the market power, it was not demonstrated that it would use the power to harm competition. Speta

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Reply Comments of AT&T Corp., No. 98-147, filed October 16, 1998, at 37. Why deployment is encouraged by open access in one context, but closed access in another, is unclear to us. (83).

62. *See* LEMLEY & LESSIG, 87 (emphasis in original). The authors further explain:

> The naïve assumption that AT&T will voluntarily open the market to competition flies in the face of AT&T's established policy, compounded by the consolidation that is occurring in the broadband market. The Bureau does not explain exactly what "market forces" will compel AT&T to open this market. How exactly will customers of a certified natural monopoly exercise the power to "vote with their wallets?" The only plausible disciplining effect the market might have on AT&T's closed access policy is to slow the rate of subscription to cable modem service, because the bundled service AT&T provides is less attractive than an open alternative. But there is no reason to believe that AT&T, lacking effective competitors in the broadband business in any given city, will recognize or respond to this market threat. Further, if the Bureau's hope is that AT&T will be forced into open access because consumers will delay their switch to broadband in boycott of its closed access policy, it is a supreme piece of irony to suggest that it is the threat of *regulation* that will delay the deployment of broadband technology..

63. *See Written Ex parte of Assistant Professor James B. Speta*, in the Matter of Application for Consent to Transfer of Control of Licenses MediaOne Groups, Inc to AT&T, CS Docket No. 99-251, December 14, 1999) [hereinafter SPETA].

proceeded to present a *theoretical* argument about why a facilities monopolist would not abuse its market power in the vertically related content market.

The claims that "[m]onopolists generally have no incentive to retard innovation in adjacent markets"[64] and that "AT&T's acquisition of cable systems does not create incentives for anticompetitive behavior"[65] are inconsistent with empirically observable behavior. It is difficult to see how ISPs and content services are no threat to AT&T's monopoly over cable, when, for example, the first thing the cable monopolists do is to disable streaming video to prevent it from competing with cable services. AT&T owns a great deal of programming, which it is protecting by this exclusion. Moreover, AT&T's market power is exercised to keep independent ISPs from delivering other high-speed services to consumers and to prevent consumers from using the cable-based Internet in ways that @Home does not like. Those companies impacted by these exclusionary practices believe there are business reasons for these decisions.

Thus, we have direct empirical evidence that market power exists and is being exercised in the broadband cable market. Despite this evidence, we are given a series of theories of contestability[66] and claims that the "network nature of broadband Internet access will provide incentives for openness, not for anticompetitive behavior."[67] We are told that the presumption should favor the monopolist: that the "general presumption ought to be that that

64. *Id*., p. 8.
65. *Id*. p. 14.
66. *Id.*, p. 14.
67. *Id*. p. 17.

monopolists will not be assumed to act anticompetitively in adjacent markets."[68] This presumption should be rejected.

In media and communications networks, this presumption should go the other way. Congress has repeatedly affirmed a heightened concern about excessive economic power in these industries and the Federal Trade Commission ("FTC") acted as recently as two years ago to prevent a merger that looked exactly like the AT&T/MediaOne merger—it forced TCI out of active ownership of a Time Warner as part of the Time Warner/Turner merger—on the grounds that the vertical tie between distributions and programming was a threat to the public interest.

Finally, the claim that AT&T's willingness to negotiate with multiple ISPs proves that its economic interest will lead it to openness is incorrect. AT&T did not make this offer until forced to do so by politics, not economics. AT&T was resolute in defending its market power until it began to realize that it might not get the unregulated monopoly it wanted. It was asked by the FCC to negotiate. It seeks to minimize its concession to preserve as much of its market power as it can, while alleviating political pressures. Further, as shown in this paper, what AT&T has offered will not achieve open access in a meaningful economic sense. Under similar political pressure AOL made a similar concession, which goes farther, but falls well short of eliminating its market power.

The fact that Lemley, Lessig, and Speta refer to the Microsoft case to inform the discussion of broadband access policy is interesting and useful for several reasons. The claim that the Microsoft case "points in the opposite direction"[69] ignores the facts in the case. It

68. *Id*. p. 11.
69. *Id.*, p. 15.

certainly does not show that a monopolist in one market has no interest in leveraging into another market.

Contestability and network externality theories repeatedly have been used to justify monopolies, which in the case of AT&T and Microsoft have resulted in massive consumer harm and decade-long antitrust actions. The Microsoft case proves that despite the nature of its industry, which had what economists incorrectly thought was the strongest claim that positive network externalities create a need for beneficent natural monopolies, its practices were more like those of a plain old abusive monopoly.

The Microsoft monopoly over the Windows operating system is being leveraged, just as the monopoly over cable facilities is being leveraged, into related markets.[70] Microsoft engages in both protecting and leveraging its monopoly. The value of the desktop and other applications markets into which Microsoft has leveraged its Windows monopoly is now as large as the operating systems market. The states wanted to litigate this issue as well. As shown by Judge Jackson in his discussion of Microsoft's attack on office suites (SmartSuite) and video applications (QuickTime), Microsoft's market power was exercised in this case.[71] The Department of Justice did not want to litigate practices in that market because it felt the operating system market case could be won resoundingly. It made sense to attack the heart of the monopoly, the operating system, because an effective remedy would end Microsoft's ability to leverage other markets.

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70. *See* CONSUMER FEDERATION OF AMERICA, *The Consumer Case Against Microsoft* (Oct. 1998); *The Consumer Harm Caused by the Microsoft Monopoly: The Facts Speak for Themselves and They Call For A Stern Remedy* (Nov. 1999); *Monopoly Power, Anticompetitive Business Practices and Consumer Harm in the Microsoft Case* (Dec. 1999).

71. *See* United States v. Microsoft Corp., 65 F.Supp. 2d 1, 27, 30 (D.D.C. 1999).

The contracts AT&T wants to impose on independent ISPs are reminiscent of the contracts Microsoft imposed on original equipment manufacturers ("OEMs") before the trial, as described in Exhibit III-1. AT&T demands the right to set the terms and conditions of "pricing, billing, customer relationship, design of start page, degree of customization, speed, system usage, caching services, co-branding, ancillary services, advertising and e-commerce revenues, and infrastructure costs."[72]

This is as clear an indication of leverage as one could hope for. If AT&T did not have market power over facilities, it would not be able to dictate the fundamental business practices in a separate market. Exhibit III-1 identifies four broad categories of anticompetitive behavior identified in the Microsoft and AT&T broadband business practices. The discrimination practices will be discussed in detail in the remainder of the article.

EXHIBIT III-1
ANTICOMPETITIVE PRACTICES

ANTICOMPETITIVE BEHAVIOR	MICROSOFT ACTION	AT&T BROADBAND ACTION
Stamp out competition for the core monopoly	Suppress Middleware; "Jolt" competitors by degrading quality of interop-erability	Ban Video Streaming; Restrictions on backbone, caching, precedence, and committed access rate
Control the flow of innovation around the monopoly	Quicktime, Realnetworks; Intel NSP	Limit up stream, ban servers, and LANS
Maximize profits in adjacent markets	Capture the desktop through bundling,	Bundle cable, leverage

72. Letter from David N. Baker, Vice President of Legal and Regulatory Affaris of Mindspring Enterprises, James W. Cicconi, General Counsel and Executive Vice President of AT&T Corp., and Kenneth S. Fellman, Chairman, FCC Local & State Government Advisory Committee, to William E. Kennard, Chairman of the Federal Communications Commission (Dec. 6, 1999) (on file with author) [hereinafter Mindspring Letter].

	price squeeze	information price squeeze
Control the customer	Boot screen, foreclose distribution	Start page, restrict marketing

The references to the Microsoft case are instructive in another regard. The problem of addressing market power after it has become deeply entrenched in this industry is particularly difficult for the very reasons outlined in this paper. If the FCC fails to impose open access under the Telecommunications Act of 1996, we end up with the ten year antitrust saga of the *United States v. Microsoft, Corp*.[73] Lemley and Lessig have made the point that the government can pursue open access through antitrust litigation, which they consider "extremely inefficient."[74] One of the costs of antitrust litigation is uncertainty: "To say there is no reason to use a seatbelt because there is always the care of an emergency room is to miss the extraordinary costs of any ex post remedy."[75] Further, Lemley and Lessig argue that the government is ill-positioned to undo established monopolies, and that the costs would be prohibitive.[76]

Of special concern is the potential harm to the vibrant ISP market, harm that cannot be easily repaired. Lemley and Lessig caution that competition will not "magically" reappear": "If the vibrant market for ISPs in narrowband access is weakened or destroyed because they cannot provide broadband service, those ISPs and their innovative contributions will

73. 65 F.Supp.2d 1 (D.D.C. 1999) .
74. LEMLEY & LESSIG, *supra* note 11, ¶ 102.
75. *Id.*
76. *Id.*

disappear."[77] Lemley and Lessig conclude that the prudent course is to adopt an open access policy at the outset.

> The way to reduce uncertainty, and promote broadband adoption, would be for the FCC to simply state a clear policy—that cable must be architected to facilitate open access to cable customers . . . Just as the FTC has required online merchants to deal with privacy, or face regulation, so too could the FCC require access providers with significant market power to provide open access, or face regulation if they don't. The policy—open access—should be clear, even if cable companies control how it is implemented in the first instance. [78]

B. COMMERCIAL INTERESTS AND PUBLIC POLICY FLIP-FLOPS: REALITY VS. REALITY

1. CHANGING POLICY POSITIONS

Before they purchased cable TV companies, both AT&T and AOL were vigorous and prominent advocates for the proposition that governments must intervene to ensure fair competition and open access to the broadband Internet. Promptly upon the acquisition of cable wires, they reversed their policies and ceased supporting a public obligation to provide open access to cable facilities. Yet they continue to demand that open access requirements be imposed on other types of facilities they do not own.

While this is certainly not the first policy flip-flop driven by merger or acquisition, it is unique given what AOL and AT&T are seeking from policymakers: a "trust-me," hands-off approach to open access. If AOL and AT&T were just expressing a self-interested, but inaccurate, description of cable's monopoly power before they purchased cable properties, then how can they be "trusted" to do anything other than follow their current self-interest in

77. *Id.* ¶ 68.
78. *Id.* ¶ 90.

exercising control over access to their cable systems? On the other hand, if their previous policy positions reflected an accurate description of the market structure and critical steps needed to ensure open access -- as we believe they did -- then how is it possible for the "market," as they described it, to open itself up? This paper offers a detailed description of the market structure and elements of open access as presented to the public by AOL and AT&T before they sought to become cable companies through merger.

Based on AOL[79] and AT&T's[80] past assessment of the market, which we believe is accurate and coincides with our own past research, how can the public trust them to do anything other than exercise the market power that they claimed cable companies possess? Why should policymakers entrust "our broadband future," or "the next generation," or the architecture of the Internet to a cable market dominated by AOL and AT&T, when those companies provided policymakers with market analysis demonstrating that openness can only be achieved through regulatory mandate?

To trust them to voluntarily withhold their monopoly power (that they previously sought government control over) is like relying on a dictator's promise to act benevolently. Their economic interests will inevitably drive them to abuse their market power. In order to allay fears about the remarkable concentration that is taking place in the industry, these companies have offered a series of explanations and claims that actual and potential competition will alleviate or prevent market power problems. When these arguments fail to quiet critics and the companies are pressed to provide better assurances, the companies insist

79. America Online Inc., "Open Access Comments of America Online, Inc.," before the Department of Telecommunications and Information Services, San Francisco, October 27, 1999.

80. AT&T Canada Long Distance Services, "Comments of AT&T Canada Long Distance Services Company," before the *Canadian Radio-television and Telecommunications Commission*, Telecom Public Notice

they can be counted on to voluntarily negotiate fair arrangements for access to their newly acquired facilities. These promises stand in sharp contrast to the statements they made before they secured a favored place on the information superhighway by purchasing exclusive rights to its most attractive high-speed lanes.

This section relies on official statements made to governmental entities by these corporations. They loudly demanded a public policy that imposes open access obligations on broadband facility owners. The purpose is not to chastise the companies for changing positions. Rather, the purpose is to understand why they were so adamant about security open access to cable facilities. There are still thousands of Internet service providers out there who have not been able to purchase their own wires, and never will be. They still need the protections that these two huge corporations demanded.

AT&T made a lengthy filing before the Canadian Radio-Television and Telecommunications Commission from the perspective of an unaffiliated content provider owning no wires in Canada. It argued strongly that an open access requirement is necessary to promote competition and ensure that unaffiliated content providers would not be discriminated against by the owners of broadband access facilities. In doing so, it provided a detailed and point-by-point refutation of every one of the arguments that AT&T, as a dominant cable operator in the United States, has made against open access.

AOL's advocacy of a public policy requiring open access is well known and its overnight reversal of position has attracted a great deal of attention. It argued vigorously for

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CRTC 96-36: Regulation of Certain Telecommunications Service Offered by Broadcast Carriers, February 4, 1997.

open access at the federal level.[81] What is less well known is the detailed description of open access that AOL offered a couple of months before its proposed merger with Time Warner.[82] The City of San Francisco witnessed one of the most prolonged fights over open access. The City supported the concept but required technical, legal and economic analysis before it imposed an open access requirement. AOL, which had fought bitterly for open access in the City, answered the challenge by outlining not only the justifications for open access, but a road map to the light-handed requirements that would keep the broadband Internet open.

Although the advocacy of AT&T and AOL for open access for cable modems for broadband Internet service are the central concern in this paper, it is important to note that these two corporations have also advocated open access for other technologies. AT&T argues for open access to telephone networks for advanced services. Its most recent statements, filed in the U.S. in late-January 2000, make especially interesting reading in light of the vigorous fight AT&T has put up against open access requirements for its cable systems.[83]

This sharp reversal of position by both companies underscores the need for binding public policy, rather than vague private sector promises, to protect and promote competition in the next generation of Internet development. To put the matter bluntly, it is patently obvious that important public policies which will determine the free flow of commerce and

81. At the federal level, AOL's most explicit analysis of the need for open access can be found in "Comments of America Online, Inc.," *In the Matter of Transfer of Control of FCC Licenses of MediaOne Group, Inc. to AT&T Corporation*, Federal Communications Commission, CS Docket No. 99-251, August 23, 1999 (hereafter, AOL, FCC).

82. AOL, San Francisco.

83. "Comments of AT&T Corp. in Opposition to Southwestern Bell Telephone Company's Section 271 Application for Texas," In the Matter of Application of SBC Communications Inc., Southwestern Bell Telephone Company, and Southwestern Bell Communications Services, Inc. d/b/a Southwestern Bell Long Distance for Provision of In-Region InterLATA Services in Texas, Federal Communications Commission, CC Docket No. 00-4, January 31, 2000 (hereafter, AT&T SBC Comments).

information in the "Internet Century" cannot be left to the whims of the commercial interests of large corporations that change their views with every merger or acquisition.

2. THE GOVERNMENT ROLE IN ENSURING OPEN ACCESS

Did these companies really advocate a role for government policy to ensure open access? There is no doubt about it.

a. AOL

While AOL always intended for private parties to implement open access by negotiating the necessary details to implement an obligation created by government action, it simply cannot hide from the critical role it felt government had to play. **AOL urged governments to make an unequivocal commitment to a comprehensive and meaningful policy of open access that clearly signaled that closed access is not acceptable. It urged San Francisco to back up that commitment by providing a private right of action and a threat of government enforcement.** AOL stated:

> The City's critical and appropriate role is to establish and firmly embrace a meaningful open access policy, not to manage the marketplace. We believe that once such a policy is fully in place, the industry players will negotiate the details to fairly implement open access. The City thus should not have to play an active role in enforcing non-discriminatory pricing or resolving pricing disputes. Rather, the City should simply adopt and rely on a rule that a broadband provider must offer high speed Internet transport services to unaffiliated ISPs on the same rates as it offers them to itself or its affiliated ISP(s). The City's unequivocal commitment to this policy and the resulting public spotlight should offer enforcement enough, and indeed we expect that cable operators will adjust their ways readily once they understand that a closed model for broadband Internet access will not stand. When necessary, the opportunity to seek injunction or bring a private cause of action would offer a fallback method of obtaining redress…
>
> As stated above, the City's role is to establish a comprehensive open access policy with an effective enforcement mechanism. Network management issues are best left to the industry players, and the City need not play a hands-on role in this area. The companies involved are in the best position to work out specific implementation issues. This is not to say, however, that a reluctant provider would not have the

> ability to interfere with the successful implementation of an open access regime. Accordingly, through its enforcement policy if necessary, the City should ensure that the necessary degree of cooperation is achieved. (AOL, pp. 4-5).

AOL did not have to defend the need for open access in its comments to San Francisco, since the proceeding was to implement open access requirements. It did, however, pat the city on the back for endorsing open access. As AOL put it:

> AOL applauds the City for taking this critical step in the implementation of the Board of Supervisors' open access resolution, which wisely supports consumers' freedom to choose their Internet service provider and to access any content they desire – unimpeded by the cable operator. (AOL, p. 1).

AOL also offered its arguments for open access in the FCC's proceeding overseeing the AT&T/MediaOne merger.

> What this merger does offer, however, is the means for a newly "RBOC-icized" cable industry reinforced by interlocking ownership relationships to (1) prevent Internet-based challenge to cable's core video offerings; (2) leverage its control over essential video facilities into broadband Internet access services; (3) extends it control over cable Internet access services into broadband cable Internet content; (4) seek to establish itself as the "electronic national gateway" for the full and growing range of cable communications services.
>
> To avoid such detrimental results for consumers, the Commission can act to ensure that broadband develops into a communications path that is as accessible and diverse as narrowband. Just as the Commission has often acted to maintain the openness of other late-mile infrastructure, here too it should adopt open cable Internet access as a competitive safeguard – a check against cable's extension of market power over facilities that were first secured through government protection and now, in their broadband from, are being leveraged into cable Internet markets. Affording high-speed Internet subscribers with an effective means to obtain the full range of data, voice and video services available in the marketplace, regardless of the transmission facility used, is a sound and vital policy – both because of the immediate benefit for consumers and because of its longer-range spur to broadband investment and deployment. Here, the Commission need do no more than establish an obligation on the merged entity to provide non-affiliated ISPs connectivity to the cable platform on rates, terms and conditions equal to those accorded to affiliated service providers. (AOL, FCC, p. 4).

b. AT&T

AT&T's policy recommendations in Canada were oriented toward a federal agency. It argued that federal regulatory authorities should not forbear regulation, exactly the opposite of what it now argues in the U.S.

> AT&T Canada LDS submits that the application of the Commission's forbearance test to the two separate markets for broadband access and information services supports a finding that there is insufficient competition in the market for broadband access services and the market for information services to warrant forbearance at this time from the regulation of services when they are provided by broadcast carriers. As noted above, these carriers have the ability to exercise market power by controlling access to bottleneck facilities required by other service providers. It would appear, therefore, that if these services were deregulated at this time, it would likely impair the development of competition in this market as well as in upstream markets for which such services are essential inputs. (AT&T, p. 15).

AT&T argued that vertically integrated cable and telephone facility owners possess market power and have to be prevented from engaging in anticompetitive practices. These are the very same arguments AOL made in the U.S. two years later.

> The dominant and vertically integrated position of cable broadcast carriers requires a number of safeguards to protect against anticompetitive behaviour. These carriers have considerable advantages in the market, particularly with respect to their ability to make use of their underlying network facilities for the delivery of new services. To grant these carriers unconditional forbearance would provide them with the opportunity to leverage their existing networks to the detriment of other potential service providers. In particular, unconditional forbearance of the broadband access services provided by cable broadcast carriers would create both the incentive and opportunity for these carriers to lessen competition and choice in the provision of broadband service that could be made available to the end customer. Safeguards such as rate regulation for broadband access services will be necessary to prevent instances of below cost and/or excessive pricing, at least in the near-term.
>
> Telephone companies also have sources of market power that warrant maintaining safeguards against anticompetitive behaviour. For example, telephone companies are still overwhelmingly dominant in the local telephony market, and until this dominance is diminished, it would not be appropriate to forebear unconditionally from rate regulation of broadband access services (AT&T, p. 15).
>
> In the opinion of AT&T Canada LDS, both the cable companies and the telephone companies have the incentive and opportunity to engage in these types of anticompetitive activities as a result of their vertically integrated structures. For

> example, cable companies, as the dominant provider of broadband distribution services, would be in a position to engage in above cost pricing in uncontested markets, unless effective constraints are put in place. On the other hand, the telephone company will likely be the new entrant in broadband access services in most areas, and therefore expected to price at or below the level of cable companies. While this provides some assurances that telephone companies are unlikely to engage in excessive pricing, it does not address the incentive and opportunity to price below cost. Accordingly, floor-pricing tests would be appropriate for services of both cable and telephone companies. (AT&T, pp. 16-17)
>
> Furthermore, in the case of both cable and telephone broadcast carriers, safeguards would also need to be established to prevent other forms of discriminatory behaviour and to ensure that broadband access services are unbundled. (AT&T, p. 17).

C. THE NEED FOR OPEN ACCESS: ANALYSIS OF SUPPLY AND DEMAND FACTORS

The recommendation that government requirements for open access are necessary to promote and protect competition rests on extensive analysis of market structure. A comprehensive case was laid out by AT&T in Canada and AOL in the U.S, which rejected each of the major arguments against open access. AT&T/AOL cited five supply-side characteristics and three demand-side characteristics that support the recommendation for open access.

1. SUPPLY-SIDE

a. Vertical Integration

AT&T drove a very hard bargain when it came to the question of regulation of access to broadband facilities. It viewed one fundamental problem as leveraging market power from the core business of vertically integrated facilities owners who have a dominant position in an adjacent market. Thus, it advocated regulation of access not only because there was a lack of competition in the new market (broadband access), but also because there was a lack of

competition in the core markets that the facilities owner dominates (cable TV service for cable operators and local exchange service for telephone companies).

> In terms of the appropriate period in which to apply the safeguards, AT&T Canada LDS is of the view that safeguards against anticompetitive behavior would need to be maintained for cable companies until competition in the provision of broadband access services has been established in a substantial portion of the market…
>
> In the case of cable companies, there would need to be evidence that vigorous and effective competition had evolved in a substantial portion of the market for broadband access services and in their core businesses (i.e., the distribution of broadcast programming services). Moreover, in order to protect against abuse of any residual market power, safeguards should be in place, including the implementation of an effective price mechanism for basic and extended basic cable services in order to prevent instances of cross-subsidization, and provision of non-discriminatory and unbundled access to the broadband service of cable broadcast carriers. (AT&T, pp. 17… 18)
>
> Similar considerations apply to the case of telephone companies with respect to local telephone services. Until vigorous competition in local telephony markets exists, some safeguards… will be needed. (AT&T 17).

AOL described the threat of vertically integrated cable companies in the U.S. in precisely these terms.

> At every link in the broadband distribution chain for video/voice/data services, AT&T would possess the ability and the incentive to limit consumer choice. Whether through its exclusive control of the EPG or browser that serve as consumers' interface; its integration of favored Microsoft operating systems in set-top boxes; its control of the cable broadband pipe itself; its exclusive dealing with its own proprietary cable ISPs; or the required use of its "backbone" long distance facilities; AT&T could block or choke off consumers' ability to choose among the access, Internet services, and integrated services of their choice. Eliminating customer choice will diminish innovation, increase prices, and chill consumer demand, thereby slowing the roll-out of integrates service. (AOL, FCC, p. 11)

c. Paucity Of Alternative Facilities

AT&T maintained that the presence of a number of vertically integrated facilities owners does not solve the fundamental problem that nonintegrated content providers will inevitably be at a severe disadvantage. Since non-integrated content providers will always

outnumber integrated providers, competition can be undermined by vertical integration. In order to avoid this outcome, even multiple facilities owners must be required to provide non-discriminatory access.

> Furthermore, as noted above, every carrier that provides local access services will control bottleneck access to its end customer. This means that any connecting carriers, such as IXCs, have no alternatives available to obtain access to the end customers or the access provider, other than persuade their customers to switch to another access provider or to become vertically integrated themselves. In AT&T Canada LDS' view, neither of these alternatives is practical. Because there are and will be many more providers of content in the broadband market than there are providers of carriage, there always will be more service providers than access providers in the market. Indeed, even if all of the access providers in the market integrated themselves vertically with as many service providers as practically feasible, there would still be a number of service providers remaining which will require access to the underlying broadband facilities of broadcast carriers. (AT&T, p. 12).

AOL also argues that the presence of alternative facilities does not eliminate the need for open access.

> Moreover, an open access requirement would provide choice and competition of another kind as well. It would allow ISPs to choose between the first-mile facilities of telephone and cable operators based on their relative price, performance, and features. This would spur the loop-to-loop, facilities-based competition contemplated by the Telecommunications Act of 1996, thereby offering consumers more widespread availability of Internet access; increasing affordability due to downward pressures on prices; and a menu of service options varying in price, speed, reliability, content and customer service. (AOL, FCC, p. 14)

Another indication of the fact that the availability of alternative facilities does not eliminate the need for open access policy can be found in AOL's conclusion that the policy should apply to both business and residential customers. In San Francisco, the city asked whether the policy of open access "should apply only to residential services"? The business sector has experienced a great deal more competition for telephone service and broadband services. DSL, which was originally intended by telephone companies as a business service,

is much better suited to this market segment and market analysis indicates that cable and telephone companies are dividing this market more evenly. If ever there was a segment in which the presence of two facilities competing might alleviate the need for open access requirement, the business segment is it. AOL rejected the idea.

> Defining "consumers" to include only residential customers, however, would unduly limit the fulfillment of these goals. There is no indication that the Board intended to exclude business customers from the benefits flowing from competition and choice… The City should thus ensure nondiscriminatory open access to broadband Internet access for residential and business services alike. (AOL, pp. 1-2).

d. Essential Access Functions

AT&T also made a much more profound argument about the nature of the integration of facilities and programming. AT&T defined access to the customer as an essential input to the delivery of information services for both cable and telephone facilities.

> AT&T Canada LDS is of the view that broadband access services are a bottleneck service. These facilities are a necessary input required by information service providers seeking to deliver their services to their end-user customers. In fact, many of these access facilities share the same bottleneck characteristics as those exhibited by narrowband access facilities, such as those which are used in the provision of local and long distance telephony services. (AT&T, p. 10)

Because of the essential nature of access, AT&T attacked the claim made by cable companies that their lack of market share indicates that they lack market power. AT&T argued that small market share does not preclude the existence of market power because of the essential function of the access input to the production of service.

> By contrast, the telephone companies have just begun to establish a presence in the broadband access market and it will likely take a number of years before they have extensive networks in place. This lack of significant market share, however, is overshadowed by their monopoly position in the provision of local telephony services.
>
> In any event, even if it could be argued that the telephone companies are not dominant in the market for broadband access services because they only occupy a

small share of the market, there are a number of compelling reasons to suggest that measures of market share are not overly helpful when assessing the dominance of telecommunications carriers in the access market…

Where the market under consideration involves the provision of telecommunications access service (such as the market for broadband access services), it is more important to examine the supply conditions in the relevant market than the demand conditions, which characterize that particular market. This is because telecommunications access service represents an essential input to the production process of other service providers. Therefore, even if the service provider only occupies a very small market share of the overall market for broadband access services, it is dominant in the provision of its access services because alternate providers must rely on that access provider in order to deliver their own services to the end-user subscriber. (AT&T, pp. 8, 9).

AOL also identified the critical importance of access.

The key, after all, is the ability to use "first mile" pipeline control to deny consumers direct access to, and thus a real choice among, the content and services offered by independent providers. Open access would provide a targeted and narrow fix to this problem. AT&T simply would not be allowed to control consumer's ability to choose service providers other than those AT&T itself has chosen for them. This would create an environment where independent, competitive service providers will have access to the broadband "first mile" controlled by AT&T – the pipe into consumers' homes – in order to provide a full, expanding range of voice, video, and data services requested by consumers. The ability to stifle Internet-based video competition and to restrict access to providers of broadband content, commerce and other new applications thus would be directly diminished. (AOL, FCC, p. 13)

AT&T explicitly rejected the claim that nondominant firms in the access market should be excused from open access regulation.

AT&T Canada LDS does not consider it appropriate to relieve the telephone companies of the obligation… on the grounds that they are not dominant in the provision of broadband services. These obligations are not dependent on whether the provider is dominant. Rather they are necessary in order to prevent the abuse of market power that can be exercised over bottleneck functions of the broadband access service. It should be noted that… Stentor [a trade association of local telephone companies in Canada] was of the view that *new entrants in the local telephony market* should be subject to regulation and imputation test requirements because of their control over local bottleneck facilities. Based on this logic, the telephone companies, even as new entrants in the broadband access market, should be subject to similar regulatory and imputation test requirements (AT&T, p. 24, emphasis added)

d. New Markets Need Open Access

As indicated in the above quotes, AT&T argued for open access at an early stage of development of broadband in Canada. Thus, AT&T's argument responds directly to the claim that the market is too new to require an open access obligation. AT&T argued that the requirement is necessary to ensure that the market develops in a competitive direction from its early stages in Canada.

AOL argued exactly the same thing in the U.S., when the market was still new, but much more highly developed. It argued that requiring open access early in the process of market development would establish a much stronger structure for a proconsumer, procompetitive market. Early intervention prevents the architecture of the market from blocking openness and avoids the difficult task of having to reconstruct an open market at a later time.

> The Commission should proceed while the architecture for cable broadband is still under construction. To wait any longer would allow the fundamentally anti-consumer approach of the cable industry to take root in the Internet and spread its closed broadband facility model nationwide. Must consumers await an "MFJ for the 21st Century"?
>
> Obliging AT&T to afford unaffiliated ISPs access on nondiscriminatory terms and conditions – so that they, in turn, may offer consumers a choice in broadband Internet Access – would be a narrow, easy to administer, and effective remedy. It would safeguard, rather than regulate, the Internet and the new communications marketplace. The openness it would afford is critical to a world in which – as boundaries are erased between communications services and applications – we ensure that consumers likewise are truly afforded choice without boundaries. (AOL, FCC, p. 18)

e. Open Access Speeds Deployment

There is a final supply-side argument that these companies have made that is critically important to the ongoing debate, which involves the impact of open access requirement on the

deployment of facilities. AOL argues that open access conditions would do little to slow, and might actually speed, the development and deployment of broadband facilities, while they ensure a vigorously competitive content market.

> Open access will not unduly increase cable operator's financial risk. A nondiscriminatory transport fee set by the cable operator would allow AT&T to recover full transport costs plus profit from each and every interconnecting provider. And AT&T's affiliated ISP would still be free to compete – based on cost and quality – with other ISPs. As Forrester Research observed, "[c]able companies can make money as providers of high-speed access for other ISPs. Instead of gnashing their teeth, large cable operators should make their networks the best transport alternative for providers of all types of telecommunications services." According to AT&T itself, "the only way to make money in networks is to have the highest degree of utilization." Open access would allow AT&T to do just that, fostering a wholesale broadband transport business that would increase use of the cable operator's platform, fuel innovation, and attract additional investment. (AOL, pp. 6-7)

2. DEMAND-SIDE FUNDAMENTALS

AT&T offered a series of observations about the nature of the demand side of the broadband market reinforcing the conclusion that an open access requirement is necessary.

a. Narrowband Does Not Compete With Broadband

The most fundamental observation on the demand side offered by AT&T is the fact that narrowband services are not a substitute for broadband services.

> AT&T Canada LDS notes that narrowband access facilities are not an adequate service substitute for broadband access facilities. The low bandwidth associated with these facilities can substantially degrade the quality of service that is provided to the end customer to the point where transmission reception of services is no longer possible. (AT&T, p. 12).

AT&T and the cable industry say exactly the opposite in the U.S. This is a critical point in the antitrust analysis of the AT&T-MediaOne merger. If the narrowband market is a separate market from broadband, as AT&T so clearly argued in Canada, then the

concentration of broadband services that AT&T proposes to accomplish through merger in the U.S. appear to violate the antitrust laws.

Not only did AT&T reject the notion that competition for narrowband Internet service is sufficient to discipline the behavior of vertically integrated broadband Internet companies, it expressed the concern that leveraging facilities in the broadband market might damage competition in the whole content market.

> As noted above, even though the market for Internet access service generally demonstrates a high degree of competition (with the exception of co-axial cable Internet access services), the potential exists for providers who also control the underlying access to undermine the continuation of such competition. Accordingly, AT&T Canada LDS submits that safeguards against anti-competitive behaviour should be applied to the provision of information service by those broadcast or telecommunications carriers who own and operate broadband access networks. (AT&T, p. 17).

AOL raised a parallel concern. It argues that the leverage from integration could undermine the prospects for increased competition in the traditional cable industry.

> We submit that, to answer this question, the Commission should examine certain critical "mega-effects" of the proposed AT&T/MediaOne combination. First, the FCC should consider how this merger's video and Internet access components together would service to keep consumer from obtaining access to Internet-delivered video programming – and thereby shield cable from competition in the video market. (AOL, FCC, p. 8)

b. Switching Costs

AT&T also made an argument in Canada on the demand-side that undercuts its claims in the U.S. that the current advantage of cable over DSL should not be a source of concern. AT&T argued that the presence of switching costs can impede the ability of consumers to change technologies, thereby impeding competition.

> [T]he cost of switching suppliers is another important factor which is used to assess demand conditions in the relevant market. In the case of the broadband access market, the cost of switching suppliers could be significant, particularly if there is a

> need to adopt different technical interfaces or to purchase new equipment for the home or office. Given the fact that many of the technologies involved in the provision of broadband access services are still in the early stages of development, it is unlikely that we will see customer switching seamlessly form one service provider to another in the near-term. (AT&T 12)

The equipment (modems) and other front-end costs are still substantial and unique to each technology. There is very little competition between cable companies (i.e. overbuilding). Thus, switching costs remain a substantial barrier to competition.

c. Bundling

A third demand-side problem identified by AT&T in Canada is the leverage that vertically integrated firms possessing market power in an adjacent market can bring to bear on a new market. By packaging together broadband services, particularly those over which integrated firms exercise market power, non-integrated competitors can be placed at an unfair advantage.

> [T]his dominance in the broadband access market provides cable broadcast carriers with considerable market power in the delivery of traditional broadcasting services. This dominant position in the core market for BDU (cable TV programming] services can, in turn, be used by the cable companies to leverage their position in the delivery of non-programming services, the vast majority of which will be carried over their cable network facilities.
>
> As broadcasting and telecommunications technologies converge, subscribers will seek to simplify their access arrangements by obtaining all of their information, entertainment and telecommunications services over a single broadband access facility. This in turn will make it more difficult for service providers to use alternate access technologies as a means of delivering service to their customers. (AT&T, pp. 8-9).

Bundling remains one of the focal points of antitrust and competitive concern in the U.S. AOL raised the bundling issue in its comments at the FCC as well.

> Second, the agency should reflect upon how this merger would enable cable to use RBOC-like structure to limit consumer access to the increasingly integrated video/voice/data communications services offered over the broadband pipe

> controlled by cable. And finally, the agency should recognize how these two "mega-effects" of the merger together reinforce cable's ability to deny consumers the right to choose: (a) between a competitive video-enhanced Internet service rather than a traditional cable service; (b) among competing cable Internet services; and (c) among competing "bundles" of video/data/voice services that contain multichannel video. (AOL, FCC, p. 8)

D. CONCLUSION: UNDERSTANDING THE PRESENT AND LOOKING TO THE FUTURE OPEN ACCESS IS CRITIAL

It is hard to see fundamental changes in the marketplace since AT&T so vigorously supported open access in 1997 AOL certainly cannot make no such claim. In fact, AT&T's analysis of the broadband market is still applicable.

First, many of the arguments it made are unaffected by changes in the industry. There are fundamental characteristics of the communications and broadband industry identified by AT&T/AOL (which require open access to facilities.) These enduring characteristics of the market – paucity of facilities compared to content providers, access as an essential input, separate narrowband and broadband markets, switching costs, bundling -- establish the need for a public obligation to provide open access.

Second, AT&T's view of the likely development of alternative technologies expressed in Canada is similar to the view that many take today. The two wireline technologies that are up and running, although not fully deployed, are dominant. Cable is ahead of DSL. Wireless is farther out in the future.

> [I]t would appear that there is only a limited number of broadcast carriers that are capable of offering broadband access services. Indeed, only the cable and telephone companies appear to be positioning themselves as hybrid broadcast/telecommunications carriers at the present time. While this is not to say that other service providers such as MMDS and LMCS carriers do not have plans to launch hybrid services of their own, neither of these service providers currently offer both broadcasting and telecommunications services on a facilities basis over their networks.

> In the opinion of AT&T Canada LDS, the supply conditions in broadband access markets are extremely limited. There are significant barriers to entry in these markets including lengthy construction periods, high investment requirements and sunk costs, extensive licensing approval requirements (including the requirements to obtain municipal rights of way)… Under these circumstances, the ability for new entrants or existing facilities-based service providers to respond to nontransitory price increases would be significantly limited, not to mention severely protracted (AT&T, pp. 7, 12).

Third, even where there have been positive developments in the industry to expand alternatives, it is not clear that such changes have been or will soon be of sufficient magnitude to change the basic conclusion of AT&T's analysis. Many analysts reach the same conclusion today about the U.S., that AT&T reached three years ago about the Canadian market. The changeable characteristics of the market that might lessen, but not negate, the need for open access, have simply not moved far enough to create a basis to contradict AT&T's conclusion that open access is necessary. Ironically, AT&T told Canadian regulators not to speculate about the development of technologies. They were told to deal with the facts on the ground, not what might happen in the future.

> As noted above and in some of the preceding sections, the market for broadband access services is subject to rapid innovation and technological change. Indeed, the recent advances in wireless broadband delivery systems suggests that the possibility exists, at least in the long term, for a break-through in technology which could have a significant impact on the supply conditions affecting broadband access services. However, since the happening of these events is difficult to anticipate and the resulting impact on the market essentially unpredictable, it is appropriate to design policies and approaches to regulation which address the current market conditions and a need to supply safeguards in those instances where market power is present. (AT&T 15).

Any claim that the market situation has changed so much that open access is no longer necessary is totally undermined by AT&T's continued insistence in the U.S. that telephone companies be required to make their advanced services networks available to competitors.

AT&T continues to make exactly the same arguments about the telephone companies in the U.S. today, that they made about the Canadian telephone companies in Canada in 1997.

In opposing the entry of SBC into long distance in Texas, AT&T complains about bottleneck facilities, vertical integration, and bundling of services. As a result, it demands non-discriminatory access. It has simply stopped making the arguments that apply with equal force to cable companies. Needless to say, AT&T refuses to accept the same public policy obligation to provide open access to the approximately 2 million cable homes that its cable wires pass in Texas.

> Today, SWBT is exploiting its control over essential xDSL-related inputs, not only to prevent advanced services competition from AT&T and others, but also to perpetuate its virtual monopoly over the market for local voice services…
>
> SWBT has not, in fact, complied with its statutory duties to provide nondiscriminatory access to xDSL-capable loops (47 U.S.C. s. 271(c)(2)(B)(ii)&(iv)) and the operational support systems and processes that are needed to enable Texas consumers to benefit from a competitive market for xDSL services (47 U.S.(c)(2_(B)(ii))…
>
> SWBT must also have policies, procedures, and practices in place that enable AT&T (by itself, or through partners) to provide consumers with the full range of services they desire, including advanced data services. Otherwise they will not be able to purchase some services – and will therefore, be less inclined to obtain any services – from AT&T. Thus, SWBT's inability (or unwillingness) to support AT&T's and other new entrants' xDSL needs not only impairs competition for advanced services but also jeopardizes competition for voice services as well.
>
> As both the Commission and Congress have recognized, high-speed data offerings constitute a crucial element of the market for telecommunications services, and, because of their importance, the manner in which they are deployed will also affect the markets for traditional telecommunications. Many providers have recognized the growing consumer interest in obtaining "bundles" of services from a single provider. Certainly SBC, with its $6 billion commitment to "Project Pronto" has done so. AT&T is prepared to compete, on the merits, to offer "one-stop shopping" solutions. Competition, however, cannot survive if only a single carrier is capable of providing consumers with a full package of local, long distance, and xDSL services. (AT&T SBC Comments, pp. 9… 10… 11… 12)

Now that AT&T has bought a stake in the majority of cable wires in the country, it excludes cable programming and cable-based broadband Internet from the mix of services that must be included in the bundle. It is willing to compete on the "merits to offer one-stop shopping" by demanding open access to other people's wires, but it will not allow the same terms and conditions for others to compete over its wires.

AOL, however, did not hesitate to point out the powerful anticompetitive effect that integrating video services in the communications bundle could have. The video component of the bundle is certainly one of the most important of the components.

> The second "mega-effect" of this proposed merger is of even broader potential consequence. With this merger, AT&T would take an enormous next step toward its ability to deny consumers a choice among competing providers of integrated voice/video/data offerings – a communications marketplace that integrates, and transcends, an array of communications services and markets previously viewed as distinct. (AOL, FCC, pp. 9-10).

IV. COMMUNICATIONS INDUSTRIES REQUIRE SPECIAL SAFEGUARDS AGAINST THE ABUSE OF MARKET POWER

A. THE INTERNET PRINCIPLES

The threat posed by the horizontal concentration and vertical integration caused by the creation of this digital cartel with a closely integrated duopoly at its core, is heightened by the efforts of these companies to impose a fundamental change on the public policy governing communications infrastructure in our society. A recent book entitled *Code and Other Laws of Cyberspace*[84] ("*Code*") has attracted a great deal of attention because it popularized an understanding of the effects of closed network architecture.[85] The dynamic, open nature of the Internet is threatened by technological and legal developments.[86] The book argues that

84. Lawrence Lessig, Code and Other Laws of Cyberspace (1999) [hereinafter Lessig].

85. *See id*, p. 166–67.

> Relative anonymity, decentralized distribution, multiple points of access, no necessary tie to geography, no simple system to identify content, tools of encryption,—all these features and consequences of the Internet protocol make it difficult to control speech in cyberspace. The architecture of cyberspace is the real protector of speech there; it is the real "First Amendment in cyberspace," and this First Amendment is no local ordinance.
>
> . . . The architecture of the Internet, as it is right now, is perhaps the most important model of free speech since the founding. This model has implications far beyond e-mail and web pages.

86. *See id*, p. 207.

> We are just leaving a time when the code writers are a relatively independent body of experts and code is the product of a consensus formed in forums like the Internet Engineering Task Force (IETF). These were regulatory bodies whose standards set policy, but they were in one sense disinterested in the outcome; they wanted to produce nothing more than code that worked.
>
> We are entering a very different world where code is written within companies where standards are the product of competition; where standards tied to a dominant standard have advantages. We are entering a world where code is corporate in a commercial sense, and leaving a world where code was corporate in a very different sense.
>
> To the extent that code is law, to the extent that it is a chosen structure of constraint, we should worry about how it is structured and whose interests may define its constraint, just as we worry when lawmaking power is assumed by a private body. If code is law, who are the lawmakers? What values are being embedded in the code?

this change can be managed, if not prevented, to minimize the damage to the qualities of the Internet we wish to preserve.[87] The author, Lawrence Lessig, recognizes that values central to our way of life are at stake.

> We are enabling commerce in a way we did not before; we are contemplating the regulation of encryption; we are facilitating identity and content control. We are remaking the values of the Net, and the question is "Can we commit ourselves to neutrality in this reconstruction of the architecture of the Net?"
>
> I do not think we can. Or should. Or will. We can no more stand neutral on the question of whether the Net should enable centralized control of speech than Americans could stand neutral on the question of slavery in 1861. We should understand that we are part of a worldwide political battle; that we have views about what rights should be guaranteed to all humans, regardless of their nationality; and that we should be ready to press those views in this new political space opened up by the Net.[88]

Lessig's concern starts from the threat to the design principles of the Internet. The key traits that have made the Internet the vibrant engine of progress are the decentralized nature of applications development at the periphery of the network. As scholars at Harvard law school have put it:[89]

> The "End-to-End" principle organizes the placement of functions within a network. It counsels that that "intelligence" in a network be located at the top of a layered system— at its "ends," where users put information and applications onto the network — and that the communications protocols themselves (the "pipes" through which information flows) be as simple and general as possible. (16)
>
> While the End-to-End design principle was first adopted for technical reasons, it has important social and competitive features as well. End-to-end expands the competitive horizon, by enabling a wider variety of applications to connect and use the network. It maximizes the number of entities that can compete for the use and

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87. *See id.* at 209.

> The decision then is not about choosing between efficiency and something else, but about which values should be efficiently pursued. My claim in each of these cases is that to preserve the values we want, we must act against what cyberspace otherwise will become. The invisible hand, in other words, will produce a different world. And we should choose whether this world is one we want.

88. Id., p. 205.

89. Lemley and Lessig.

applications of the network. As there is no single strategic actor who can tilt the competitive environment (the network) in favor of itself, or no hierarchical entity that can favor some applications over others, an End-to-End network creates a maximally competitive environment for innovation, which by design assures competitors that they will not confront strategic network behavior. (18)

The End-to-End design of the Internet has facilitated innovation. As Reed, Saltzer and Clark argue, for example: "had the original Internet design been optimized for telephony-style virtual circuits (as were its contemporaries SNA and TYMNET), it would not have enabled the experimentation that led to protocols that could support the World-Wide Web, or the flexible interconnect that has led to the flowering of a million independent Internet Service providers. Preserving low-cost options to innovate outside the network, while keeping the core network services and functions simple and cheap, has been shown to have very substantial value." (19)

The principle of End-to-End is not unique to computer networks. It has important analogs in American constitutional law and in other legal contexts. Vis-à-vis the states, for example, the dormant commerce clause imposes an End-to-End design on the flow of commerce: No state is to exercise a control over the flow of commerce between states; and the kind of control that a state may exercise over commerce flowing into that state is severely limited. The "network" of interstate commerce is to be influenced at its ends — by the consumer and producer — and not by intermediary actors (states) who might interfere with this flow for their own political purposes. Vis-à-vis transportation generally, End-to-End is also how the principle of common carriage works. The carrier is not to exercise power to discriminate in the carriage. So long as the toll is paid, it must accept the carriage that it is offered. In both contexts, the aim is to keep the transportation layer of intercourse simple, so as to enable the multiplication of applications at the end. (20)

The effect of these Internet design principles — including, but not exclusively, End-to-End — has been profound. By its design, the Internet has enabled an extraordinary creativity precisely because it has pushed creativity to the ends of the network. Rather than relying upon the creativity of a small group of innovators who work for the companies that control the network, the End-to-End design enables anyone with an Internet connection to design and implement a better way to use the Internet. By architecting the network to be neutral among uses, the Internet has created a competitive environment where innovators know that their inventions will be used if useful. By keeping the cost of innovation low, it has encouraged an extraordinary amount of innovation. (21)

Economists at Berkeley have reached a similar conclusion.

Open infrastructure policy fostered user-driven innovation. This meant that the principal sources of new ideas driving economic growth emerged from a long-term process of experimentation and learning, as business and consumer users iteratively

adopted and shaped application of information technology and E-commerce. Such user-centered innovation processes flourish when users are granted access to a wide range of choices of facilities, services, and network elements…. [E]xperimentation with what might be called "network performance features" was an unglamorous but critical underpinning for innovation and services. The rejection of a monopoly over network architecture was critical to these innovations. Furthermore, in an unexpected collateral benefit, the virtuous circle of policy and market innovation came to be recognized by the rest of the world as the right template for network competition and the growth of the Internet. It thus gave the US a voice in global policy that went far beyond its political and market power…

Experimentation by users and competition among providers, across the range of segments that constitute the Internet, generated a surge of self-sustaining innovation. Perhaps the most dramatic single example is the emergence and evolution of the World Wide Web, driven almost entirely by Internet users who pioneered all of its applications. The World Wide Web in turn facilitated a new surge of innovation that has ushered in Internet based E-commerce. This network openness and the user-driven innovation it encouraged were a distinct departure from the prevailing supply-centric, provider-dominated, traditional network model. In that traditional model a dominant carrier or broadcaster offered a limited menu of service options to subscribers; experimentation was limited to small scale trials with the options circumscribed and dictated by the supplier.

Diversity of experimentation and competition on an increasingly open network were key, since nobody could foresee what would eventually emerge as successful applications. Openness allowed many paths to be explored, not only those which phone companies, the infrastructure's monopoly owners, would have favored. Absent policy-mandated openness, the Regional Bell Operating Companies (RBOCs) and monopoly franchise CATV networks would certainly have explored only the paths of direct benefit to them. It is doubtful that without such policy-mandated openness the Internet Revolution would have occurred.

For well over a decade, the FCC played an active role in keeping the information superhighway open under the Act, not under the antitrust laws.[90] It has reversed course and

90. *See* Bar et al., p. 14. The authors further explained:

The FCC allowed specialized providers of data services, including Internet Service Providers (ISPs) and their customers access to raw network transmission capacity through leased lines on cost-effective terms. Regulatory policy forced open access to networks whose monopoly owners tried to keep closed. The resulting competition allowed the FCC to free the service providers from detailed regulation that would have kept them from using the full capabilities of the network in the most open and free manner.

Thanks to the enduring FCC policy of openness and competition, specialized networks and their users could unleash the Internet revolution. Open network policy assured the widest possible user choice and

declared a policy of inaction with respect to cable-based broadband Internet,[91] services. Doing nothing, however, allows cable-based broadband service to be deployed and operated on a closed, proprietary basis.[92] Although the FCC has not decided how the service should be

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the greatest opportunities for users to interact with the myriad of emerging new entrants in all segments of the network. To be sure, the FCC strategy emerged haltingly but its direction never changed. Indeed, the Commission consistently backed cost-based access to the network (initially through leased lines and later through unbundled network elements). The de facto result of this policy, and of more conscious choices symbolized by the *Computer III* policies, was to prevent phone company monopolies from dictating the architecture of new data-related services. The Commission thus supported competition and innovation, time and again, by unfailingly keeping the critical network infrastructure open to new architectures and available to new services on cost-effective terms. The instruments of FCC policy were to make leased lines (and, lately, network elements) available on cost-oriented terms and to forebear from regulating Internet and other data services. This steady policy set in motion, and sustained, a virtuous cycle of cumulative innovation, new services, infrastructure development, increasing network usage with evident economic benefits for the U.S. economy.

91. *See id*, p. 2, 6, the article further illustrates:

> As cable moves from "broadcast" to "broadband," cable infrastructure becomes a key element in digital video, data, and voice communications and all the issues about network openness return to the forefront. Unfortunately, in a misreading of its own history the FCC may abandon its successful policy just as a new generation of services, spurred by mass-deployment of broadband Internet services, are defining the future of networking and the electronic economy. After a series of courageous decisions in the 1990s to hold its course on data networking, even after the economic stakes grew bigger, the FCC is now starting to confuse the instruments of its successful policy with the logic of its strategy. That strategy, again, was to maintain network openness by making key network components available to all, on cost-effective terms, so as to allow competition and innovation.
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> . . . The question is obvious. The successful policy trend of the past thirty years has been to force competition and assure open access to the incumbent infrastructure. Why, now, reverse that successful policy?

92. Henry Geller, *The FCC and Internet Access*, ELECTRONIC MEDIA, Apr. 19, 1999, p. 15. The cable TV model, which is based on private carriage, is quite different than the telecommunications model. Closed system operators may choose who has access to the "pipe." Unaffiliated content providers have no way to market directly to the public. In order to be seen, they must negotiate with the owner of the transmission system who sets the terms and conditions of interconnection without open access obligations. *See id.*

Geller describes the cable approach as follows:

> Cable is also initiating a program for broadband access to the Internet through cable modems (called @Home or Road Runner). But unlike the telco situation, cable ties its broadband transmission service together with taking cable as an ISP—that is, it bundles the transmission service with the information service.
>
> Further, it will not permit any unbundling so that the transmission service is not available to rival ISPs. It asserts that the bundle is not a telecom service but simply another cable service.
>
> Cable, which has a monopoly today in multichannel video distribution, is seeking to gain control over cable subscribers' use of the Internet.
>
> Through its bundling requirement and refusal to allow rivals access to its broadband transmission facilities, it becomes the Internet gatekeeper for all those who sign up to obtain cable broadband

treated legally, it has aggressively taken the position that local cable franchise authorities should not require it to be operated on an open basis. The consequences of this decision are huge. Doing nothing, in this instance, does a great deal of harm.[93]

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access.

> If this is just another cable service, the cable operator can decide what information should come to the subscriber. It can refuse to allow other information services on its own cable channels.

Geller, p. 12.

Morgan Stanley Dean Witter draws a sharp distinction between the treatment of cable and that of common carriage:

> In the 1984 Cable Act, cable services were able to avoid common carrier regulation for two reasons: first, cable service would involve only one-way transmission; and second, its content would be similar to that provided by broadcast television stations in over-the-air transmission. This preserves cable's states as a contract carrier. Contract carriers are not constrained by the requirements of common carriage and have no regulatory mandate to serve everyone on the same terms. Therefore, they have more flexibility to price discriminate than a common carrier, be selective about their customers, and benefit from the management of competition among their customers.

Morgan Stanley Dean Whitter *supra* note 12, at 177. "However, due to the variety of new services that the cable industry is rolling out (including high-speed data services and telephony), cable systems potentially could be viewed as common carriers." *Id*.

88. *See* Bar et al., p. 14, demonstrating the harm of inaction:

> FCC Chairman William Kennard later explained that his agency's refusal to intervene was inspired by a "high-tech Hippocratic Oath" to "do no harm." While the FCC may believe such inaction simply continues its "unregulation" of the Internet, we should be clear that non-intervention constitutes instead a fundamental policy reversal. For thirty years the consistent FCC policy has been to foster competition, in particular cost-oriented access to essential local network facilities, and to promote an open network architecture. Far from non-intervention, this has required sustained policy intervention to keep the US communication infrastructure open. Having misread its own history, the FCC now risks misinterpreting Hypocrites: "First, do no harm" is not quite the same as "First, do nothing" and in this particular case, doing nothing is doing harm. The FCC's decision not to open a formal proceeding on access to high speed Internet service constitutes in effect a decision to permit access foreclosure. As such, it does not continue, but reverses 30 years of consistent policy direction.
>
> The decision to permit closed access is a decision to limit competition, to curtail experimentation and innovation in the Internet. It comes precisely at the wrong time, just as broadband services are beginning to emerge and this new segment of the economy is starting to grow. Unless care is taken to assure that competition in Internet service continues, the current conditions of competition and openness will be undermined as we enter the broadband phase of Internet evolution. And, collaterally, this will erode the ability of the United States to lead global policy on the next generation of broadband Internet. Any reversal of a successful and established policy should at least require justification.
>
> The policy stakes are much larger than the competitive fates of particular groups of ISPs. What is threatened, if open competition is not maintained, is the continuing evolution of the Internet, the innovation in and the evolution of electronic network-based business, and therefore the competitive development of the network economy as a whole. Closed access would undercut the current dynamic of expansion and innovation driven by Internet users and network providers. Since damage to the

B. THE SPECIAL IMPORTANCE OF NETWORKS IN COMMUNICATIONS

The importance of Lessig's message and the usefulness of the analytic scheme go far beyond concerns about the openness of the Internet. They point to a much broader question of control over networks in general. Networks are the essence of the e-world and the Internet century into which we are embarking. Global scale, fluid movement of information, and commerce have created a new economy, a new mode of production.[94]

Because these are network industries, there are two points of interconnection that become crucial choke points controlling access to the consumer and the citizen: (1) Network interfaces to accomplish interconnection, where content providers put their information packets onto the network, and (2) last mile facilities to deliver information, where consumers interconnect with the network. Market power or leverage exists whenever there is the ability to stop or disadvantage traffic as it enters or exits the network. Historically, many of the facilities we find at the choke points were exclusive franchises. Many were or still may be

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dynamic of the Internet evolution could cause great economic harm, policy should start from a presumption that competition in access and throughout the Internet system must be maintained. We are not talking here about regulation of the Internet nor of dealings among the ISPs. Rather, we are talking about assuring competition for access to the Internet over local networks, broadband as well as narrowband. Open access should be guaranteed unless it can be definitely demonstrated that competition in access, and consequently throughout the Internet system, can be maintained.

The relevant form of open access is access to the "last mile", the connection between the home and the closest network node, so that network users have a choice and so that Internet Service Providers can offer high-speed services to their customers, regardless of who owns that "last mile". Open access must be provided for each additional component of the communications and data network system, as it has been required of the communications system to date. The government should clearly establish the principle that if market power exists, whatever becomes the natural channel of Internet access will have to be configured to allow competition. Openness should depend on clear policy principle, not on corporate discretion.

94. There is a massive and growing literature on the fundamental change in the economy and its impact on society. One of the most incisive and comprehensive reviews can be found in the three volume work of Manual Castells, *The Information Age: Economy, Society and Culture, Volume I: The Rise of the Network Society; Volume II: The Power of Identity; Volume III: End of Millenium* (Blackwell, London; 1996, 1997, 1998).

natural monopolies, and many were or still may be economic monopolies. Some are evolving to duopolies or tight oligopolies.

This analysis makes the fundamental assumption that the existence of two roughly equal competitors is not enough for effective competition. Actually, five is not enough. As the market moves from six to ten roughly equal competitors, concern about ineffective competition declines. With more than ten competitors, competition presumably will be vigorous.

Those familiar with antitrust practice in the last two decades of the twentieth century will recognize that this is the market structure view adopted by the Antitrust Division of the Department of Justice ("DOJ") in the Reagan Administration.[95] It defined a market that has the equivalent of fewer than six equal-sized competitors as "highly concentrated." As a matter of public policy, the DOJ declared that such a market generally would not be allowed to become more concentrated through mergers. It defined a market with the equivalent of six to ten equal-sized competitors as moderately concentrated. In this six-to-ten category, there were also concerns about reductions in competition through mergers, which would trigger a higher level of scrutiny. Theoretical economics and empirical analyses show that these valid thresholds should inform public policy.[96]

Moreover, when we come to information industries and networks, public policy should be particularly procompetitive and err toward requiring more, not less, competition. Interconnection creates greater leverage than one finds in other markets. Information flows

95. *See* U.S. Dep't of Justice, *Merger Guidelines* (Washington: June 14, 1982).

96. *See* CONSUMER FEDERATION OF AMERICA, *Breaking the Rules: AT&T's Attempt to Buy a National Monopoly in Cable TV and Broadband Internet Services* (Aug. 17, 1999) <http:// www.consumerfed.org/internetaccess.ATT180899.pdf >.

not only through the marketplace of goods and services, but also through the marketplace of ideas. Concerns about freedom of expression should augment concerns about economic power. If four or five competitors are not enough to ensure vigorous competition, one or two closely related competitors are certainly not enough to ensure freedom of expression.

The antitrust implications of this need for caution define markets narrowly and do not rely on potential competition as an excuse for excessive concentration. The implications of this observation of public policy under the Telecommunications Act of 1996 ("the Act") should also be clear in the context of the ongoing debate about open access. The offer of two or three competing facilities as an excuse to allow proprietary leverage over closed network does not address the fundamental competition problem

The author of *Code* also identifies the different channels that need to be pursued in order to achieve open access.[97] In other words, in order to construct the social reality we want, it is critical to understand the complex pillars of social order. Social order in real space, or cyberspace, is composed of four "modalities of regulation"—law, the market, architecture, and norms.[98] It is never enough to study or attempt to change just one of the layers. Therefore, it is always important to understand how each of the layers impacts and is affected by the others.

C. THE SPECIAL ROLE OF COMMUNICATIONS NETWORKS IN SOCIETY

The battle over open access is about the rules of the road for cyberspace highways. The debate has focused on a specific and critical aspect of the law of transportation and communications networks—the terms of carriage. Will the owners of the road be required to

97. *See* LESSIG, ch. 7.
98. *See id.*

provide access to their facilities on rates, terms, and conditions that do not discriminate against the ISPs, who are not partners or affiliates of the facility owners? Or will they be allowed to treat their affiliated ISPs preferentially?

Traditionally, communications networks have been open by law. Practically, however, we have fought a long battle to ensure open access to the Internet. All of the roads that run through cyberspace should be open. Allowing the owners of these roads to operate them on a closed basis will severely undermine competition and creativity in the production and delivery of content. The driving force of dynamic Internet development would be placed at risk.[99]

The four modalities of regulation make it easy to explain the preference for a prohibition on the vertical integration of distribution facilities and programming on the ownership of conduit and content. Once the law allows vertical integration between ownership of facilities and production of content, the problem of discrimination becomes

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99. *See* LEMLEY & LESSIG, ¶ 21.

> The effect of these Internet design principles—including, but not exclusively, End-to-End—has been profound. By its design, the Internet has enabled an extraordinary creativity precisely because it has pushed creativity to the ends of the network. Rather than relying upon the creativity of a small group of innovators who work for the companies that control the network, the End-to-End design enables anyone with an Internet connection to design and implement a better way to use the Internet. By architecting the network to be neutral among uses, the Internet has created a competitive environment where innovators know that their inventions will be used if useful. By keeping the cost of innovation low, it has encouraged an extraordinary amount of innovation.

Other authors describe the issues as follows:

> Diversity of experimentation and competition on an increasingly open network were key, since nobody could foresee what would eventually emerge as successful applications. Openness allowed many paths to be explored, not only those which phone companies, the infrastructure's monopoly owners, would have favored. Absent policy-mandated openness, the Regional Bell Operating Companies (RBOCs) and monopoly franchise CATV networks would certainly have explored only the paths of direct benefit to them. It is doubtful that without such policy-mandated openness the Internet Revolution would have occurred.

highly complex because every layer of social order comes into play. The weak competition in facilities should not be allowed to undermine the vigorous competition in content.

The primary means, however, for preventing discrimination in access to communications networks is a regime of common carriage. In such an approach, all content providers must be allowed to reach customers on the same terms offered to all other providers. Open Internet access via the telephone network is grounded in common carriage principles that have governed the phone network for almost a century.

Henry Geller, former General Counsel at the FCC and Administrator of the National Telecommunications and Information Administration, describes access to today's Internet as follows:

> Today the guiding principle of telecommunications/information policy is *entry*. As to access to the Internet, there is now such open entry. Any entity, using the facilities of the local telephone company, can become an Internet service provider.
>
> The local telco itself is usually an ISP, but because it is a telecom common carrier, it must afford access to all its rivals and permit resale of its transmission services.
>
> Access today for residential customers is "narrowband." The full potential of the Internet for commerce, information and entertainment cannot be achieved without broadband access. The telcos propose to provide such access through a technique called digital subscriber line.
>
> In doing so, they remain subject to considerable regulation.
>
> But there is no controversy that the telco must continue to make its transmission facilities available to all comers, and thus as to telcos, there will continue to be wide-open competition among ISPs. [100]

Morgan Stanley Dean Witter, in a recent analysis of the emerging communications/broadcast industry, describes common carriers as follows:

100. Geller, p. 12.

> Generally, they are involved in the sale of infrastructure services in transportation and communications. The legal principle of common carriage is used to ensure that no customer seeking service upon reasonable demand, willing and able to pay the established prices, however set, would be denied lawful use of the service or would otherwise be discriminated against.
>
> .. . Significantly, a carrier does not have to claim to be a common carrier to be treated as such under the law: a designation of common carriage depends upon a carriers actual business practices, not its charter. . . .
>
> Common carriage is also thought to be an economically efficient response to reduce the market power of carriers through government regulation, preventing discrimination and/or censorship and promoting competition. It is also said to promote the basic infrastructure, reduce transaction costs from carrier to carrier, and extend some protections for First Amendment rights from the public to the private sector.[101]

It is interesting to note that even Wall Street analysts recognize the special treatment of communications networks and the media. Simple arguments about the market have never been the sole determinant of public policy. The primary means, however, for preventing discrimination in access to communications networks is a common carriage regime. In such an approach, all content providers must be allowed to reach customers on the same terms offered to all other providers. Open Internet access via the telephone network is grounded in common carriage principles that have governed the phone network for almost a century.

Policymakers recognize the uniquely important role that broadcast media, radio, and television play in the marketplace of political ideas and in forming cultural values. Because of this, explicit standards have been placed on the industry.[102] In determining the standards, policymakers have rejected the notion that economics alone should decide the nature,

101. MORGAN STANLEY, *supra* note 12, at 177–78.

102. *See* CHARLES M. FIRESTONE & JORGE REINA SCHEMENT, TOWARD AN INFORMATION BILL OF RIGHTS AND RESPONSIBILITIES 45 (1995).

availability, and content of political and cultural programming.[103] Instead, policy has sought to prevent concentration of economic power from controlling the flow of ideas in the broadcast media by placing limits on the ownership of media outlets and imposing obligations to expand programming beyond what is simply profitable.[104] What is good enough in the economic marketplace may not be sufficient in the political and cultural marketplace.

At its root, the argument is that ownership is important in determining the nature of programming. This gives rise to a series of more specific and more policy-relevant conclusions. Relying on economic forces alone will not produce diversified programming adequate to create the rich political and cultural arena demanded by political discourse. The empirical evidence from the past two decades suggests that concerns about economic control over the media argue strongly for a cautious approach to concentration of media ownership.[105] Greater concentration results in less competition.[106] There is evidence of the anticompetitive

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103. *See* Duncan H. Brown, *The Academy's Response to the Call for a Marketplace Approach to Broadcast Regulation*, 11 CRITICAL STUDIES IN MASS COMMUNICATION 257 (1994); Yochai Benkler, *Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain*, 74 N.Y.U. L. REV. 354 (1999).

104. *See* FED. COMM. COMMISSION, *Further Notice of Proposed Rulemaking in the Matter of Review of the Commission's Regulations Governing Television Broadcasting*, MM Docket No. 91-221, 54–55 (January 17, 1995).

105. The shift toward greater reliance on economic forces has not resulted in greater competition and has resulted in greater concentration in the many markets. *See* BEN H. BAGDIKIAN, THE MEDIA MONOPOLY IX–X (5th ed. 1997). *See generally* HARRY C. BOYTE AND SARA M. EVANS, FREE SPACES: THE SOURCE OF DEMOCRATIC CHANGE IN AMERICA (1986); ROBERT M. ENTMAN, DEMOCRACY WITHOUT CITIZENS: MEDIA AND THE DECAY OF AMERICAN POLITICS (1989); DORIS A. GRABER, MASS MEDIA AND AMERICAN POLITICS (4th ed. 1993); ROBERT W. MCCHESNEY, RICH MEDIA POOR DEMOCRACY: COMMUNICATION POLITICS IN DUBIOUS TIMES (1999); William H. Melody, *Communication Policy in the Global Information Economy: Wither the Public Interest?, in* PUBLIC COMMUNICATION: THE NEW IMPERATIVES: FUTURE DIRECTIONS FOR MEDIA RESEARCH (Marjorie Ferguson, ed., 1990); Jay G. Blumler and Carolyn M. Spicer, *Prospects for Creativity in the New Television Marketplace: Evidence from Program Makers*, 40 J. COMM. 78 1990*;* Herbert H. Howard, *TV Station Group and Cross-Media Ownership: A 1995 Update*, 72 JOURNALISM & MASS COMM. Q. 390 (1995); William H. Melody, *The Information in I. T.: Where Lies the Public Interest?*, INTERMEDIA, June/July 1990, at 10.

106. *See* Stephen Lacy et al., *Competition and the Allocation of Resources to Local News,* 2 J. MEDIA ECON. 3 (1989); Stephen Lacy, et al., *Cost and Competition in the Adoption of Satellite News Gathering Technology*, 1 J. MEDIA ECON. 51 (1988); Stephen Lacy, *The Effects of IntraCity Competition on Daily Newspaper Content,* 64 JOURNALISM Q. 281 (1987); Stephen Lacy & James M. Bernstein, *The Impact of Market*

behaviors expected to be associated with reductions in competition, such as price increases and excess profits.[107]

Concern about diversity rests on a series of straightforward, empirically observable relationships between economic interests and the political and cultural content of programming.[108] The dictates of mass audiences create a lowest common denominator ethic that undercuts that ability to deliver politically and culturally relevant diversity in programming,[109] reduces public interest in culturally diverse programming,[110] news, and public affairs programming,[111] and compromises the quality of the programming.[112] Technological

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Size on the Assembly Cost of Local Television News, 19 MASS COMM. REV. 41 (1992); Stephen Lacy et al., *The Relationship Among Economic, Newsroom and Content Variables: A Path Analysis*, 2 J. MEDIA ECON. 51 (1989); Dominic L. Lasorsa, *Effects of Newspaper Competition on Public Opinion Diversity*, JOURNALISM Q. 38 (1991); Jan P. Vermeer, *Multiple Newspapers and Electoral Competition: A County-Level Analysis*, 72 JOURNALISM & MASS COMM. Q. 98, 104 (1995).

107. *See* Benjamin J. Bates, *Station Trafficking in Radio: The Impact of Deregulation*, 37 J. BROADCASTING AND ELECTRONIC MEDIA 21 (1993); Julian L. Simon et al., *The Price Effects of Monopolistic Ownership in Newspapers*, 31 ANTITRUST BULLETIN 113 (1986); Michael O. Wirth & James A. Wollert, *The Effects of Market Structure on Television News Pricing*, 28 J. BROADCASTING 215 (1984).

108. *See* Benkler, *supra* note 18; Brown, *supra* note 18.

109. *See* BAGDIKIAN, *supra* note 20, at 182–88; Raymond L. Carroll and C.A. Tuggle, *The World Outside: Local TV News Treatment of Imported News*, 74 JOURNALISM AND MASS COMM. Q 123 (1997); P. Clarke & E. Fredin, *Newspapers, Television, and Political Reasoning*, 42 PUB. OPINION Q. 143 (1978); Michael Pfau, *A Channel Approach to Television Influence*, 34 J. BROADCASTING & ELECTRONIC MEDIA 195 (1990); D. T. Cundy, *Political Commercials and Candidate Image, in* NEW PERSPECTIVES ON POLITICAL ADVERTISING (Lynda Lee Kaid, et. al, eds., 1986); Garrett J. O'Keefe, *Political Malaise and Reliance on the Media*, 57 JOURNALISM Q. 122 (1980); John P. Robinson & Dennis K. Davis, *Television News and the Informed Public: An Information Processing Approach*, 40 J. COMM. 106 (1990); Karen L. Slattery et al., *The Expression of Localism: Local TV News Coverage in the New Video Marketplace*, 40 J. BROADCASTING AND ELECTRONIC MEDIA 403 (1996); Paul S. Voakes et al., *Diversity in the News: A Conceptual and Methodological Framework*, 73 JOURNALISM AND MASS COMM. Q. 582 (1996).

110. *See* Patricia Aufderheide, *After the Fairness Doctrine: Controversial Broadcast Programming and the Public Interest*, 40 J. COMM. 47, 50–51 (1990); James M. Bernstein & Stephen Lacy, *Contextual Coverage of Government by Local Television News*, 69 JOURNALISM Q. 329 (1992); Raymond L. Carroll, *Market Size and TV News Values*, 66 JOURNALISM Q. 49 (1989); Michael L. McKean & Vernon A. Stone, *Why Stations Don't Do News*, 45 COMMUNICATOR 23, 24 (1991); Karen L. Slattery & Ernest A. Hakanen, *Sensationalism Versus Public Affairs Content of Local TV News: Pennsylvania Revisited*, 38 J. BROADCASTING AND ELECTRONIC MEDIA 205 (1994); David K. Scott & Robert H. Gobetz, *Hard News/Soft News Content of the National Broadcast Networks*: *1972–1987*, 69 JOURNALISM Q. 406 (1992); Vernon A. Stone, *Deregulation Felt Mainly in Large-Market Radio and Independent TV*, 41 COMMUNICATOR 9, 12 (1987); Vernon A. Stone, *New Staffs Change Little in Radio, Take Cuts in Major Markets TV*, 42 COMMUNICATOR 30 (1988).

111. *See* BAGDIKIAN, *supra* note 20, at 220–21; DAVID L. PALETZ & ROBERT M. ENTMAN, MEDIA, POWER, POLITICS (1981); NEIL POSTMAN, AMUSING OURSELVES TO DEATH: PUBLIC DISCOURSE IN THE AGE OF SHOW

answers do not alter the underlying economic relationships[113] and the mass-market audience orientation of the business takes precedence.[114]

Almost three-quarters of a century of public policy concerning the mass media has been predicated on the recognition of the uniquely powerful impact of that media. Broadband Internet services take the role of the broadcast media to a higher level, adding to immense reach interactivity,[115] real time immediacy,[116] and visual impact.[117] Because it is such a potent method of information dissemination, economic control over mass media can result in excessive political power.[118]

BUSINESS (1985); Stephen Lacy, *The Financial Commitment Approaches to News Media Competition*, 5 J. MEDIA ECON. 5 (1992).

112. *See* John C. Busterna, *Television Station Ownership Effects on Programming and Idea Diversity: Baseline Data*, 26 J. MEDIA ECON. 63 (1988); David C. Coulson and Stephen Lacy, *Journalists' Perceptions of How Newspaper and Broadcast News Competition Affects Newspaper Content*, 73 JOURNALISM AND MASS COMM. Q. 354 (1996); Jonathan Kwitny, *The High Cost of High Profits*, 12 WASH. JOURNALISM REV. 19 (1990); Barry R. Litman and Janet Bridges, *An Economic Analysis of Daily Newspaper Performance*, 7 NEWSPAPER RES. J. 9 (1986); Barry R. Litman, *The Television Networks, Competition and Program Diversity*, 23 J. BROADCASTING 393 (1979); Angela Powers, *Competition, Conduct, and Ratings in Local Television News: Applying the Industrial Organization Model*, 6 J. MEDIA ECON. 37 (1993).

113. *See* DON R. LE DUC, BEYOND BROADCASTING (1987); Allard S. De Jong & Benjamin J. Bates, *Channel Diversity in Cable Television*, 35 J. BROADCASTING AND ELECTRONIC MEDIA 159 (1991); August E. Grant, *The Promise Fulfilled? An Empirical Analysis of Program Diversity on Television*, J. MEDIA ECON., 1994, at 51; Richard Lubunski, *The First Amendment at the Crossroads: Free Expression and New Media Technology*, 2 COMM. L. AND POL'Y 165 (1997); Norman M. Sinel et al., *Current Issues in Cable Television: A Re-Balancing to Protect the Consumer*, 8 CARDOZO ARTS & ENT. L.J., 387 (1990**)**; Thomas Streeter, *The Cable Fable Revisited: Discourse, Policy, and the Making of Cable Television*, 4 CRITICAL STUD. IN MASS COMM. 174 (1987); Robert H. Wicks & Montague Kern, *Factors Influencing Decisions by Local Television News Directors to Develop New Reporting Strategies During the 1992 Political Campaign*, 22 COMM. RES. 237 (1995)**;** Brian Winston, *Rejecting the Jehovah's Witness Gambit*, 18 INTERMEDIA 21 (1990).

114. *See* V. E. Ferrall, *The Impact of Television Deregulation*, J. COMM. 26, (1992); Kenneth C. Loudon, *Promise Versus Performance of Cable*, *in* WIRED CITIES: SHAPING THE FUTURE OF COMMUNICATIONS 27 (William H. Dutton et al. eds., 1987).

115. *See* BAGDIKIAN, p. at 182.

116. *See* Gigi Sohn & Andrew J. Schwartzman, *Broadcast Licensees and Localism: At Home in the "Communications Revolution"*, 47 FED. COMM. L.J. 383 (1994).

117. *See* Kathryn Olson, *Exploiting the Tension Between the New Media's "Objective" and Adversarial Roles: The Role Imbalance Attack and its Use of the Implied Audience*, 42 COMM. Q. 36 (1994); Alan G. Stavitsky, *The Changing Conception of Localism in U.S. Public Radio*, 38 J. BROADCASTING & ELECTRONIC MEDIA 19 (1994).

118. In a 1995 article, Philo Washburn illustrated the relationship between economics and politics as follows: "Widespread belief in economic competition as the foundation for a genuine 'marketplace of ideas' was exploited effectively by the Reagan administration and by powerful corporations such as AT&T, ITT, General

Cities like Portland have not sought to impose full common carriage obligations on broadband Internet services. Rather, they are seeking a policy of non-discriminatory access. Cable companies would be able to set reasonable terms and conditions in private negotiations, as long as the same terms and conditions they grant to their affiliates are available to non-affiliated Internet service providers. The argument has turned on an "essential facilities" discussion of cable-based broadband service.[119]

Electric, CBS, Capital Cities, and IBM to eliminate much of the regulatory structure of America's communications industry." Philo C. Washburn, *Top of the Hour Radio Newscasts and the Public Interest*, 39 J. BROADCASTING AND ELECTRONIC MEDIA 73, 75 (1995).

119. *See* AT&T v. City of Portland, No. CV99-65-PA (D. Or. June 3, 1999). The Judge in the Portland case summarized this approach as follows:

> The Commission found that @Home had no viable competitor in the local retail market for residential Internet services. The Commission recommended that the City and County regulate AT&T's cable modem platform as an "essential facility" to protect competition. "Essential facility" is a term of art in antitrust law, meaning a facility that competitors cannot practically duplicate and that is otherwise unavailable. See Image Technical Service., Inc., v. Eastman Kodak Co. 125 F.3d 1195, 1210 (9th Cir. 1997), cert. denied, 118 S. Ct. 1560 (1998). A business that controls an essential facility may not exclude competitors without a "legitimate business reason for refusal." City of Anaheim v. Southern California Edison Co., 955 F. 2d 1272, 1379 (9th Cir. 1992).
>
> The Commission intended that the open access requirement allow customers of unaffiliated ISPs to "obtain direct access to their [ISP] of choice without having to pay the full @Home retail rate. Defs. Mem in Supp. Of Cross Mot. at 5. Unaffiliated ISPs would not get a free ride on the cable modem platform. They would pay AT&T for access.

Id. at 4–5.

As the citations in the Portland ruling indicate, the essential facilities cases are quite recent. In fact, the idea of essential facilities in communications networks and high technology industries has received a great deal of attention, in part as a result of the Microsoft antitrust case, although a long line of cases affecting electronic networks exists. *See* Thomas A. Piraino, Jr., *An Antitrust Remedy for Monopoly Leveraging by Electronic Networks*, 93 NW. U. L. REV. 1 (1998). Piraino explained:

> The essential facilities doctrine, which was first adopted by the Supreme Court in 1912, recognizes that a monopolist can gain an unfair competitive advantage in a related market by denying its competitors the right to access a resource required to engage in effective competition in that market. Indeed, one of Congress's principle goals when it enacted the Sherman Act in 1890 was to prevent the Standard Oil Trust from denying other oil refiners the right to use the pipelines and rail transportation facilities necessary to bring their products to market . . . .
>
> . . . By requiring open access to other networks that constitute the only means of entering a particular market, the courts and antitrust enforcement agencies can insure that consumers retain the benefits of competition in those industries as well.

Id. at 6–7.

The essential facilities doctrine is well grounded in antitrust analysis.[120] The antitrust principle is simple. AT&T gains an unfair advantage in the ISP market for its affiliate Excite@Home ("@Home") by denying competing ISPs access to a resource—cable transmission—that is necessary to compete in the market and which cannot be reasonably reproduced by the competitor. The purpose is to ensure that consumers have a choice of suppliers of programming by ensuring that competitors have an opportunity to access the transmission network. Programs win or lose in the marketplace based on their merits as programs, not based on their preferential access to an essential input.

In addition to these arguments under the antitrust laws, there are other bases for requiring open access—these exist under the communications laws and may even be more compelling. Lemley and Lessig argue that open access is "short hand for a set of objectives."[121] The digital subscriber line objective ("DSL") could serve as a model for cable-based broadband objectives; following this model, the FCC only needs to concentrate on providing customers with choices in order to preserve competition. For example, the FCC could impose restrictions on the AT&T/MediaOne merger without even addressing the

120. As the citations in the Portland ruling indicate, the essential facilities cases are quite recent. In fact, the idea of essential facilities in communications networks and high technology industries has received a great deal of attention, in part as a result of the Microsoft antitrust case, although a long line of cases affecting electronic networks exists. *See* Thomas A. Piraino, Jr., *An Antitrust Remedy for Monopoly Leveraging by Electronic Networks*, 93 NW. U. L. REV. 1 (1998). Piraino explained:

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Id. at 6–7.

regulatory scheme set forth in sections 251 and 252 of the Telecommunications Act of 1996 ("the Act").[122]

Even if more than one technology could successfully penetrate the market, allowing a small number of distribution networks to each chose a favorite service provider would not ensure effective commercial competition and raises major concerns about the ability of the network to support free expression. Two or three competitors are not enough to ensure competition. Two or three preferred service providers are not enough to ensure free speech.

> This view misunderstands the potential for strategic action. If there are five broadband cable networks, each acting independently, then the threat to innovation is less than if these five broadband cable networks could act in unison. If they were independent, then the decision of some networks to block certain kinds of Internet services would not necessarily influence any other networks. Thus the threat to innovation would not be as great. Once the cable monopolies can act together, however, decision to discriminate would affect a larger section of the market. The risk to innovation would therefore be much greater. Further, AT&T is implementing its bundling policy now, and a firm stance in favor of open access by the FCC could have a beneficial effect on AT&T's policy, not only regarding MediaOne, but in other markets as well. (67)

One of the most troubling aspects of the current round of arguments over open access is that even if there were competition between two technologies, the closed access model would fundamentally alter the nature of the Internet. Because each technology insists that distribution and content must be linked, we would end up with a choice of a very few, private toll roads on which favored information service providers get the best treatment, not the wide

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121. LEMLEY & LESSIG, *supra* note 11, at 84, 85.

122. Pub. L. 104-104, §§ 251, 252, 110 Stat. 56, 71 (codified as amended at 47 U.S.C. §§ 251, 252 (Supp. IV 1998)). Further, Lemley and Lessig describes the conditions that the FCC could place on AT&T/MediaOne:

> Interconnection to a cable modem, even by multiple ISPs, involves nothing more than a standard Internet connection between an ISP and a router. It does not require collocation of equipment, nor would open access conditions require AT&T/MediaOne to honor requests for interconnection at special locations within its network. So long as unaffiliated ISPs are allowed to interconnect at the same place, and at the same price, as unaffiliated ISPs, the End-to-End principle will not be compromised.

open Internet, as we know it today. The closed proprietary approach to communications networks is a radical departure from past policy

> In the past, companies that supplied the connection were rarely the same ones that supplied the information. Today, these roles are blurring. The major players are acting more like cable television companies. Cable companies control both the channels you can receive on the basis of popularity -- and which channels they happen to have investments in. When you combine control of the pipeline with the information that flows over that connection, the result is leverage that can be applied to increase profits or even manipulate public opinion.[123]

The limited competition between a very small number of delivery mechanisms and their affiliate-favored programmers will dramatically reduce the number of ISPs, restrict content and limit consumer choice.

> Why should anyone care about this? There are several issues at stake. First, is that the Internet doesn't have to work this way, and in fact shouldn't work this way. We already have about 6500 ISPs in the United States, which must be the definition of competition. They offer a wide variety of services, prices, levels of support, etc. But most of them could be wiped out in a few years if present trends continue.
>
> Second, if you have to buy an information service provider when you select what wire you want in your house, you're going to be looking at the user interface of a huge, monolithic, vertically integrated corporation. Your first encounter with the Internet is likely to look a lot like walking into a shopping mall -- boring, redundant and absolutely writhing with advertising. It is true that you can buy e-mail from someone else, or change the home page in your browser, but most users don't know this.[124]
>
> Put it this way: being able to choose you broadband ISP is just as important as being able to choose the operating system for your computer. If you lose that choice, and your ISP is bundled with the cable modem, you lose control over what you can and can't do with the

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LEMLEY & LESSIG, *supra* note 11, at 84, 85.

123. Bandwidth, p.5.

124. Chapman, Gary, "In Battle of the Internet Titan, Users are Likely to Be Losers," *Los Angeles Times*, February 1, 1999.

> Net, just as having no choice of OS means losing control over what you can and can't do with the box.[125]

A small number of closed proprietary systems will undermine consumer sovereignty and set the stage for pricing abuse. The reward for successful anticompetitive activity will be the ability to impose pricing patterns on the public that take advantage of market power. The economic literature recognizes that the introduction of and reliance on price discrimination after the initial round of positive growth is a crucial factor. The price discrimination undermines the value of existing products by creating incompatibilities.[126] This extracts consumer surplus.[127]

Price discrimination allows firms to manage market processes so that introducing later versions of a product does not eliminate the ability to extract consumer surplus, as long as price discrimination occurs.[128] Bundling, which may play a vital role in creating the critical mass for positive externalities in the early period of adoption of a technology, also can play a role in exploiting customers.[129] When combined with market power, it results in overpricing of products in the aggregate.[130]

> "Cable operators offering cable modems price the service so that consumers are required to buy their standard cable TV product, which basically removes [satellite] as a viable competitor," Nader said, criticizing AT&T's purchase of TCI. Given AT&T's history [of] anti-competitive actions, and TCI's enormous reputation for anti-competitive actions in the cable television market, it is prudent to

125. Weightman, Donald, "The Broadband Internet Wars," *Slashdot*, July 20, 1999.
126. Choi, pp. 171, 172, 173.
127. Choi, pp. 176, 177.
128. Moorthy, p. 303; Thum, pp. 280, 285, 286.
129. Matutes and Regibeau, p. 46.
130. Guiltnan, p. 74.

> expect bundling strategies to be used in anti-competitive ways against rivals.[131]

Not only does the closed access model restrict deployment of the leading technology, but telecom analyst Scott Cleland argues that it prevents intermediate technologies that could fill market needs.

> And why is broadband service deployment so slow? Well, government policy only fosters convergence investment *within* industries (i.e., within regulatory regimes). It discourages *cross-industry* convergence investment by competitors. For example, the government inadvertently is discouraging the deployment of ISP-marketed, hybrid modems that could rollout broadband service faster and cheaper to the national mass market than either cable modes or DSL. Hybrid broadband modems use the best of both plants' *existing capabilities* -- cable's high speed downstream path with the telco's reliable upstream path … but only if regulators allow competitors access to both duopoly last-mile facilities, not just the telco pipe. Schizophrenic broadband policy if unchanged, preordains a duopoly market where most American consumers will have to wait years unnecessarily while cable upgrades its one-way broadband plant for two-way and telcos upgrade their two-way narrow band plant for broadband.[132]

E. CONCLUSION

The intensity with which the open access debate is being fought around the country and the AT&T-Media one merger is being scrutinized in Washington is understandable in this context. For many involved, "the Internet Revolution" is at stake. Freedom of expression and global leadership in the information age could be deeply affected by the fundamental change in public policy toward control over the communications network.

The fundamental principles underlying open access have much greater significance than the mere question of how much competition there will be. The values at stake in open access involve much more than economics.

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131. Boersma, Matthew, "The Battle for Better Bandwidth – Should Cable Networks be Open?," *ZDNet*, July 11, 1999.

132. Convergence Diverted.

Information and communications media must be treated differently than other economic activities. Even five competing systems will not provide freedom of expression if they are all closed, and that is the inevitable outcome of initially allowing some of them to be closed. Cable companies have already asserted their proprietary right to disallow competitors' advertisements. Telephone companies insist that if the cable network is closed, theirs must be too. Open access preserves freedom of expression on the broadband Internet, no matter who owns the facilities. The fundamental nature of the Internet is at stake.

> Innovators are less likely to invest in a market where a powerful actor has the power to behave strategically against it. Innovation in streaming technologies, for example, is less likely when a strategic actor can affect the selection of streaming technologies, against new, and competitive systems. (59)
>
> One example of this cost to innovation is the uncertainty that is created for future applications of broadband technology. One specific set of such applications are those that count on the Internet being "always on." Applications are being developed, for example, that would allow the net to monitor home security, or the health of an at-risk resident. These applications would depend upon constant Internet access. (60)
>
> Whether, as a software designer, it makes sense to develop such applications depends in part upon the likelihood that they could be deployed in broadband cable contexts. Under the End-to-End design of the Internet, this would not be a question. The network would carry everything; the choice about use would be made by the user. But under the design proposed by the merged company, AT&T affiliates would have the power to decide whether these particular services would be "permitted" on the cable broadband network. Cable has already exercised this power to discriminate against some services. They have given no guarantee of non-discrimination in the future. Thus if cable decided that such services would not be permitted, the return to an innovator would be reduced by the proportion of the residential broadband market controlled by cable. (61)

Cable control of broadband access to the Internet will have two sets of damaging consequences. First, and our primary concern, the innovation and experimentation that has been central to the Internet explosion will be stifled, if not precluded. Second, Cable owners will have the capacity to control network services; voice, data, and video distribution and a

material part of the video content as well as much of the services and Internet content delivered through the cables. The risks and harms outlined here would occur whenever there is a monopoly provider of tied access and ISP service.

Closure and usage limits preclude experimentation with a wide range of alternative patterns of use. Provider domination of the processes of experimentation, learning, and innovation that preceded deregulation and the Internet will have been re-established. @Home would then become the monopsony buyer, or at least dominate a major segment of the market, for network software tools and hardware equipment. By contrast, open access to Cable would then allow the dynamic of network innovation in the broadband era to unfold with the force, pace, and innovative imagination of the narrowband era. The development logic that has characterized the Internet to date would be likely to continue. ISPs other than @Home would experiment with different patterns of service, different packages of service offerings. Each ISP would itself become a client for innovative software and hardware companies. The virtuous cycle of user-driven innovation would be sustained.

Whoever owns the network, absent competitive or regulatory constraints, will also logically try to extend its infrastructure ownership into control of the services and content it carries. In the present case, AT&T/@Home appears intent on leveraging its Cable access monopoly into markets that ride on top of Cable access. This goes well beyond the bundling of Internet service provision with other AT&T services. It has significance far beyond the simple bundling of gateway services such as e-mail or web hosting with the basic service provision.

The concept of essential functions in network industries that provide market power over end user customers even where several access providers are available is extremely important. These are the new choke points in the Internet economy. Because of switching costs, convergence of access, and bundling of products this is a fundamental observation about the nature of these industries. These demand side structural problems interact with the observation that facilities providers will always be far fewer in number than content providers with the inevitable result that absent an open access obligation many content providers will be at a severe disadvantage.

AT&T-AOL were also correct in concluding that even without vertical integration and dominance, access is an essential function. In the information economy where the smooth flow of information is so critical, these choke points may call for even greater commitment to ensure open access than has historically been the case, because their importance imbues them with even greater potential for the abuse of market power.

> Where a broadband access provider is neither vertically-integrated nor dominant with respect to telecommunications or broadcasting service, but is offering broadband access services then the requirement for third party access tariff, CEI and other non price safeguards should apply. (AT&T, p. 29)

It was quite clear in the formulation of these two "unaffiliated" companies that broadband access services should be available on non-discriminatory terms, even where there is an absence of vertical integration and dominance. They arrived at an entirely reasonable public policy formulation that is consistent with our view that communications and transportation networks have always been and should always be subject to an open access requirement because of the critical role they play.

V. DEFINING DISCRIMINATION

Given the strong arguments for open access that had been articulated by these companies prior to their acquisition of "last mile" facilities, they should not have been surprised by the intensity of the concern over open access. In response to a growing number of local cable franchising authorities that have required AT&T to provide non-discriminatory access to the cable-based broadband Internet, AT&T declared it does not intend to use exclusionary access in the future. It has offered to provide access to its cable systems to independent ISPs on very restrictive conditions and on a "voluntary" basis after the exclusive contracts that its own cable systems signed with @Home expire. In response to severe criticism about its policy flip-flop, AOL announced a similar commitment.

A. ARCHITECTURAL SOURCES OF DISCRIMINATION

The first source of potential discrimination lies in the architecture of the network, involving the technical capabilities of the network that would disadvantage independent ISPs in the activities that they are allowed to conduct. Specifically, technological bias creates the problem. Architecture involves the "built environment," which constrains behavior to follow preset patterns. The architecture of the network, controlled by the proprietor, can be configured and operated to restrict the ability of the independent ISP, while not restricting the ability of an affiliated ISP. Technology bias can take several forms. For the purposes of this analysis, we identify three general areas of architecture within the Internet: interconnection, structure, and flow control.

1. Interconnection

Interconnection allows ISPs to establish a connection between networks. These connections must be compatible if they are to be meaningful. The existing exclusive contracts do not allow independent ISPs to connect directly to consumers. @Home is frank about its intentions to link proprietary content to its control of the broadband pipes.[133] Its business model rests on exclusive arrangements with cable companies.[134] @Home will use its preferred position as an exclusive cable-based Internet service provider to win the battle to get proprietary content into people's homes.[135]

The fact that @Home withdrew from the FCC open access negotiations demonstrates the relevance of the interconnection issue. Although AT&T appears to have agreed to allow interconnection, it is unclear that others in the industry will. It is also important to recognize that mere physical interconnection and protocol support are only minimum conditions that

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133. *See* John M. Higgins, *No Worries on the @Home Front*, BROADCASTING AND CABLE (July 5, 1999). As the company's president (George Bell) put it: "Bell said that one of the company's major tasks is to develop special content or ally with developers dreaming up products that take advantage of @Home's bandwidth to get into consumers' homes. 'The power has to be proprietary content,' Bell said. 'People don't watch distribution.'" *Id*.

134. *See* @Home 10 Q, *supra* note 84.

> By virtue of our relationship with 21 cable companies in North America and Europe, we have access to approximately 65.0 million homes, which includes *exclusive* access to over 50% of the households in the United States and Canada. . . .
>
> We have entered into distribution agreements . . . with 18 cable companies in North America whose cable systems pass approximately 58.5 million homes.Id. (emphasis added).

135. *See* Brian McWilliams, *Prodigy Stumps for Access to Cable*, INTERNET NEWS.COM (July 23, 1999).

> Not so fast, said Milo Medin, *Excite@Home*'s chief technology officer. If ISPs want what he has—partnerships with 21 cable operators worldwide—it will take more than sharing a little subscriber revenue. . . .
>
> Medin said if Prodigy and other ISPs don't like the current situation, instead of running to regulators for help, they should get behind DSL, or wireless or satellite access. Or, if they're so keen on cable, said Medin, they should string their own wires, or "overbuild" as it's called in the cable industry.

must be met to ensure access to customers. Interconnection is a necessary, but not sufficient, condition to ensure open architecture.[136]

2. Structure

Structure involves the deployment of physical facilities in the network. The proprietary network owner can seriously impair the ability of independent ISPs to deliver service by restricting the ISPs' ability to deploy and utilize key technologies that dictate the quality of service. Structure determines how facilities are deployed and the effect that deployment has on the quality of service. It includes a number of potential practices like restricted backbone choice, restricted collocation, and restricted replication (or caching). These structural practices give companies a competitive advance because they are "better positioned to develop products that maximize [their] capabilities" and better positioned to "discipline competing product vendors." In fact, "[i]n an open systems era, the most consistently successful information technology companies will be the ones who manage to establish a proprietary architectural standard over a substantial competitive space and defend it against the assaults of both clones and rival architectural sponsors."[137]

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136. As described by Lemley and Lessig:

> AT&T argues that this competition is not disabled by the cable broadband architecture, since a customer can always "click-through" to a non-cable ISP. But the ability to click through provides just a fraction of the services that a competitor ISP might potentially provide. It would be as if competitor browsers on the Windows platform performed just 30% of the functions that they performed on other platforms. Further, click-though may be economically irrational even if it is technically feasible, just as Microsoft's original "per processor" license made it nominally possible but extremely unlikely for an OEM to load two operating systems onto a computer. Thus the question in this matter is not whether a user will take the time to "download" another ISP connection; there's no such download possible. The architecture ties the user to AT&T/MediaOne's ISP; users cannot cut that knot.

LEMLEY & LESSIG, *supra* note 11, ¶ 75.

137. LEMLEY & LESSIG, *supra* note 11, ¶ 40 (quoting Charles R. Morris & Charles H. Ferguson, *How Architecture Wins Technology Wars*, HARV. BUS. REV., Mar.–Apr. 1993, at 86, 88) (emphasis in original).

Forcing independent ISPs to connect to the proprietary network in inefficient or ineffective ways, or giving affiliated ISPs preferential location and interconnection can result in substantial discrimination, for example, the degradation of independent ISPs' quality of service. As one commentator explains: "Access providers choose where they attach to a long distance carrier for the Internet, known as a 'backbone provider.' The route to the backbone provider and the choice of the backbone provider are important decisions, bundled with the access service."[138]

The ability to deploy facilities to ensure and enhance the quality of service will be particularly important in the third generation of Internet service development. The multimedia interactive applications that distinguish the next phase of the Internet are particularly sensitive to these aspects of quality, much more so than previous applications. As an Internet technology publication explains the problems relating to quality: "because @Home caches content locally, its own content will have better apparent bandwidth than that of third-party content providers. Because @Home makes money through advertising and

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138. Jerome H. Saltzer, *"Open Access" is Just the Tip of the Iceberg* (Oct. 22, 1999) <http://web.mit.edu/Saltzer/www/publications/openaccess.html>. Saltzer also gives an example of the effects of forcing independent ISPs to connect to the proprietary network:

> If you reside in Massachusetts, and you connect to a computer in your office in the next town, unless your office uses the same access provider, your traffic may flow from Massachusetts down to Virginia and back. This detour introduces delays, which can significantly interfere with some kinds of service, such as video conferencing with your boss or interactive file editing. In addition to distance-related delays, you may encounter distant, response-slowing congestion, or even inability to communicate with your office when a hurricane hits Virginia.

Id. Saltzer further explains the problems with this structure:

> Your access provider again has a conflict of interest--attaching to the nearest, most effective backbone provider might divert revenue from a backbone company in which your access provider has a financial interest or other business dealings. More important for the future of innovative services, if a new backbone provider offers a specially-configured low-delay forwarding service which is just what is needed to carry telephone calls over the Internet, your access provider (which may also offer telephone service) may choose not to connect to that new backbone, effectively preventing you from using a better service.

Id.

commerce partnerships, the company has little incentive to provide higher-speed connectivity to outside content."[139]

The plans to leverage these capacities are explicitly embedded in the @Home business model: "Excite@Home offers speedier service to Internet content providers who agree to become "content partners" and share their revenue stream. Under the sole control of a broadband access monopoly, the potential for serious abuse is evident."[140]

In its annual report, @Home is very clear on these strategic practices and includes details of how @Home offers speedier service to Internet content providers who agree to become "content partners" and share their revenue stream. Under the sole control of a broadband access monopoly, the potential for serious abuse is evident. Consider in particular two practices that discriminate against competitors and favor partners: collocation and replication.[141] These practices only differ in their implementation.[142] It collects fees from its

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139. Kevin Werbach, *The Architecture of Internet 2.0*, RELEASE 1.0 (Feb. 1999) <http://www.edventure.com/release1/cable.html>. Economists at Berkeley describe the issue as follows:

> @Home is promoting itself as offering collocation service to bring better performance to @Home customers (merchants as well as end-users), but the term "collocation" is not meant in the nondiscriminatory sense that those familiar with telecommunications are wont to use. Rather, each partnership appears to be exclusive to a particular area of content. A collocated partner has faster access to @Home consumers because of a presence on the same network. @Home had, as of 1998, already collocated at least one partner (SegaSoft) and was planning to collocate others.
>
> Replication is manipulation of the caching system to favor partners. It essentially speeds requests for certain content by pre-loading it at sites that are close and well-connected to subscribers. As of 1998, @Home replicated news feeds from CNN and Bloomberg. @Home then promotes replicated and collocated partners on its portal and with its "wizards", making competitors harder to get to. The result is the creation of a cyber-marketplace which systematically favors the providers of content, services ortransactions who have a privileged financial relationship with the monopoly owner of the infrastructure that supports that cyber-marketplace. If customers had a real choice of broadband access infrastructure, this would matter less, but within the current situation, when they become customers of @Home's access infrastructure, they automatically and unknowingly receive access to a cyber-marketplace biased to favor @Home's financial partners.

Bar et al., *supra* note 14.

140. *See id.*

141. *Id*. @Home explains collocation:

> The @Media group offers a series of technologies to assist advertisers and content providers in

partnerships and it considers these to be programming practices, not discriminatory practices.[143] In fact, @Home's "own materials" recommend structuring "a cyber-marketplace that steers @Home customers, unknowingly, toward merchants who partner with @Home."[144] It creates this structure with "advantageous positioning and access of partners and through @Home's devices such as 'How-Do-I' wizards."[145] The choice for merchants is either to be a partnering merchant and reap the benefits of @Home's structure or to lose customers because they cannot access the merchant's site.[146]

3. Flow Control

Flow control involves the filtering of the flow of information. Even though networks are interconnected, there is still the possibility of discriminating against some of the data that flows through the network operator's system.

This issue of flow control received considerable attention when a series of marketing documents used by Cisco, a leading equipment supplier, were recently publicized by several consumer groups. The technical capabilities offered by the equipment can be referred to as "policy-based routing." Cisco makes the point quite clearly, in touting the technology of

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delivering compelling multimedia advertising and premium services, including replication and co-location. Replication enables our content partners to place copies of their content and applications locally on the @Home broadband network, thereby reducing the possibility of Internet bottlenecks at the interconnect points. Co-location allows content providers to co-locate their content servers directly on the @Home broadband network. Content providers can then serve their content to @Home subscribers without traversing the congested Internet.*Id.* (quoting AT HOME CORPORATION, 1998 ANNUAL REPORT 8 (1999)).

The report then describes replication: "we have established relationships with certain of our interactive shopping and gaming partners whereby we participate in the revenues or profits for certain transactions on the @Home portal. We also allow certain of our content partners to sponsor certain content channels for a fee." *Id.*

142. *See id.*
143. *See id.*
144. *Id.*
145. *Id.*
146. *Id.*

cable-based broadband Internet, that proprietary network operators can control traffic in very different ways than occurs on the Internet today.[147] As noted above, Cisco describes the technological capabilities of the "New World Internet Business Model" to discriminate in very dramatic terms.

Simply put, the technology allows pervasive discrimination against external, unaffiliated service providers. Moreover, this idea of a "New World Network" is not limited to marketing documents targeted to MSOs[148] or to manufacturers of network equipment.[149]

A recent academic analysis notes that the technical ability to control the flow of information conveys substantial power on network operators. This technical capability combined with economic incentives to disadvantage competitors, results in powerful anti-competitive bias. The academic analysis explains this discrimination in a process called filtering:

> filtering. Data is carried on the Internet in batches called packets, and every internet packet contains an identifier that gives a rough indication of what this packet is for:

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147. CISCO CONTROLLING, *supra* note 12, at 2–3.

"The ability to prioritize and control traffic levels is a distinguishing factor and critical difference between New World networks employing Internet technologies and "the Internet." *Id.* at 3.

148. *See* Jeffrey Young, *The Next Net*, WIRED, Apr. 1999, at 150; *Cisco Systems and Excite@Home Take the Cable Internet Revolution Expo to 20 cities Throughout North America*, press release, June 14, 1999.

149. Manufacturers of network infrastructure are not the only ones who sell control as a critical function of the new interactive, cable-based broadband network. Set-top box manufacturers stress similar points. As Scientific Atlanta put it:

> Conditional Access (CA) systems provide for selective access and denial of specific services. They also employ signal security techniques, such as encryption, to prevent a signal from being received by unauthorized users.
>
> In addition to protecting traditional broadcast content, a contemporary CA system also must support interactive applications, such as electronic commerce, video-on-demand, and high-speed data access. And it must protect against tampering with authorized applications, downloading viruses, or downloading unauthorized applications to the set-top.

Fred Dawson, *The Interactive Digital Network: More Than Just a Set-Top Decision* (visited July 15, 1999) <*http://www.scientificatlanta.com/DigitalNetwork/index5.htm*>.

> e-mail, a web page, a name lookup, a remote login, or file sharing. Several access providers have begun to examine every packet that they carry, and discard those with certain purposes, particularly those used for file sharing. The technical excuse for this filtering is that many users don't realize that their computer allows sharing of files, and filtering prevents other customers from misusing that feature. But some access providers have imposed filtering on every customer, including those who want to share files. There is a similar risk that pressures to restrict access by children to undesirable content such as pornography may lead an access provider to impose content filters on all of its customers, including those who disagree with the particular content restrictions. And again, there can be a conflict of interest—the access provider has an incentive to find a technical or political excuse to filter out services that compete with the entertainment or Internet services it also offers.[150]

4. Conclusion

The architectural issues pose a fundamental challenge to any simple notion of "one click access" to the Internet. As explained by economists at the University of California at Berkeley: "These capacities to structure the cyber-marketplace are of startling significance, especially when customers are unaware of the marketplace's structured biases."[151] The ability to choose another ISP "(for example if customers could choose to substitute AOL for @Home as the default ISP over their broadband cable access) would not correct the competitive problems created by broadband access architecture that rewarded @Home with performance advantages over all rivals."[152]

Although there are certainly network management problems that must be handled by cable-based Internet systems, the line between network management and anticompetitive discrimination is faint indeed. The importance of quality of service and network management

150. Saltzar.

151. *See* Bar et al., *supra* note 14. Further, the authors explain that the ability to structure is "particularly important if a single ISP has a local monopoly and of broad significance if a single ISP holds states in enough monopolies or dominant positions locally to influence the very structure of the cyber-marketplace." *Id.*

152. *See* Bar et al., *supra* note 14.

to operating an efficient network is apparent to all.[153] Access to interfaces and local caching is widely recognized as essential to the delivery of high quality services.[154] The technology is not the culprit, but the more powerful the technology, the greater the impact discrimination will have on market outcomes and the greater the temptation for abuse. Manipulation of Quality of Service (QoS) to gain an advantage for affiliated service providers is a definite possibility.[155] The fact that system vendors choose to highlight preferential treatment of

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153. *See, e.g.*, Kim MAXWELL, RESIDENTIAL BROADBAND 84–85 (Carol A. Long ed. (1999)).

> It would be uneconomical to overbuild a network so that all users could have the best class of service all the time; this would amount to circuit switching, defeating the purpose of statistical networks to begin with. Therefore, networks of the future will offer various classes of service, depending upon application, tariff structures, and willingness to pay. Each class will have to be defined by, or at least relate to, a differentiated set of Quality of Service (QoS) metrics which a network can monitor and manage.*Id*

154. *See id.*

> First, transmitting a 6-Mbps video stream from Geneva to a single user in San Francisco will cost considerably more than transmitting it two miles within Kansas City itself, so much more that it will profit information providers to replicate services rather than pay transmission charges. Second, at broadband speeds the actual delay incurred by propagating information long distances, even at the speed of light, can severely reduce throughput under many data communications protocols. Indeed, it is network delay, caused largely by routers now, that has prompted recent interest in local caching of frequently visited Web pages.

Id. at 25.

155. *See* CISCO CONTROLLING, *supra* note 12, at 3, 5.

> Multiple service delivery over IP networks brings with it an inherent problem: How do these multiple services—packetized voice, streaming media, Web browsing, database access, and e-mail—coexist without competing with each other for bandwidth?
>
> Cisco QoS has solved the problem by putting absolute control, down to the packet, in your hands.
>
> . . . .
>
> The ability to prioritize and control traffic levels is a distinguishing factor and critical difference between New World networks employing Internet technologies and "the Internet."
>
> But beyond that, new advanced QoS techniques give you the means to maximize revenue generated through bandwidth capacity providing highest quality for your most valuable services.
>
> Admission control and policing is the way you develop and enforce traffic policies. These controls allow you to limit the amount of traffic coming into the network with policy-based decisions on whether the network can support the requirements of an incoming application. Additionally, you are able to police or monitor each admitted application to ensure that it honors its allocated bandwidth reservation.
>
> Preferential queuing gives you the ability to specify packet types—Web, e-mail, voice, video—and create policies for the way they are prioritized and handled.

Id. at 3.

affiliated services only illustrates the obvious. These technologies are being developed by a number of different providers, including Cisco, 3Com, and Nortel, and have already been deployed in numerous locations by multiple cable providers.[156]

The closed, proprietary version of cable-based broadband Internet service may be a "New World Internet Business Model," as Cisco calls it, but it is simply not the Internet as we know it. It strikes at the essential nature of the Internet:

> By bundling ISP service with access, and by not permitting users to select another ISP, the architecture removes ISP competition within the residential broadband cable market. By removing this competition, the architecture removes an important threat to any strategic behavior that AT&T might engage in once a merger is complete . . . [representing] a significant change from the existing End-to-End . . . [157]

In addition to creating the discriminatory architecture, AT&T could also bundle many other things within its control of the network, positioning itself "to foreclose all competition in an increasing range of services provided over broadband lines."[158] Because of the pressure that these practices place o the principle of End-to-End, the "cable-owned-ISPs would thereby

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> Caching is the cost-effective and widely popular method of storing frequently accessed Web content regionally, near the users, to off-load the backbone of duplicated, same-page traffic. Whether it's Web-page caching or the newer streaming-media caching, the idea is the same. Both are effective ways to optimize the bandwidth of the backbone by moving some of the content to the edge of the network in stored caching servers.
>
> As a leader in the caching market, Cisco created the Web Cache Communications Protocol (WCCP) to allow Cisco Cache Engines and other cache products to communicate with Cisco routers. WCCP, built into a wide variety of Cisco IOS-based networking products, enables the transparent, scalable, and secure introduction of caching technology into networks.
>
> Committed access rate (CAR) is an edge-focused QoS mechanism provided by selected Cisco IOS-based network devices. The controlled-access rate capabilities of CAR allow you to specify the user access speed of any given packet by allocating the bandwidth it receives, depending on its IP address, application, precedence, port of even Media Access Control (MAC) address.
>
> . . . .
>
> With CAR, the choice is yours, and it's easy to make constant revisions and adjustment as traffic patterns shift.*Id,* p. 5.

156. Cisco's equipment, in particular, has seen wide deployment. Until recently, Cisco was the only CMTS provider certified as DOCSIS compliant—giving their products (which include these QoS controls) immense market power vis-à-vis their competitors.

157. LEMLEY & LESSIG, ¶ 51.

influence the development and use of cable broadband technology. They would be exercising that influence not at the 'ends' of the network, but at the center."[159] Therefore, the control is shifting from "users and programmers to a single network owner. . . [defeating] the principle that the network remains neutral, and empowers the users."[160] AT&T is positioning itself to regain its monopoly power.[161]

B. NORMS: SERVICE RESTRICTIONS

The second source of potential discrimination involves behavioral norms. AT&T's efforts to label service providers or customers who use the network in ways it does not approve of as "bandwidth hogs" suggests the appropriate social behaviors. Generally being a "hog" is not illegal or uneconomic, but it is frowned upon in our society.

The network owner can place restrictions on how nonaffiliated service providers may use the network. As long as the network owner is also a direct competitor of the independent ISP, concerns about restrictions being imposed to gain competitive advantage will persist. Restrictions that are explained as necessary for network management may be viewed as driven by business motives, rather than technical considerations, by independent ISPs. These limitations can be applied to either service providers or consumers.

The network owner may prevent independent ISPs from delivering services to consumers by restricting speed, duration of transmission, or other operational characteristics. In addition, the network owner may place limits on how customers use these networks. These

158. *Id.*
159. *Id.* ¶ 53.
160. *Id.*
161. *See id.*

practices are not merely a theoretical possibility. The exclusionary control of the network is already having an impact.[162]

1. RESTRICTIONS ON HIGH SPEED SERVICES

Use of the high-speed network by service providers is currently being limited by a general prohibition that restricts the speed of services that independent service providers can deliver. One commentator describes an example of this practice:

> As things now stand, contractual agreements with high-speed service providers, such as At Home, make it difficult to operate digital TV data access service at full rate, even though, technically, it can deliver data at 27 megabits per second to 38 Mbps to any given cluster of users on a shared-access basis.[163]
>
> Predictably, one of the first restrictions AT&T/@Home placed on Internet activity was the amount of time that streamed video could be downloaded by customers.[164] In response to the charges of discrimination and exclusion, AT&T invokes the need to manage its network. The underlying motivation, however, may well have been economic—a desire to prevent services from competing against incumbent businesses.[165] Cisco's marketing papers clearly suggest that the cable operators should gain control over the streaming video so that it does not undermine their control of the network and open the door to competing video services.[166]

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162. *See generally* Saltzer, *supra* note 90.

163. Dawson, *supra* note 102.

164. *See* Saltzer,

> Video limits. Some access providers limit the number of minutes that a customer may use a "streaming video" connection. Today, streaming video is not widely used, because it provides movies that are small and erratic, but one day streaming video is likely to become an effective way to watch television programs from many source--chosen by the customer, not the cable company--or to purchase pay-per-view movies. The technical excuse for this restriction is that the provider doesn't have enough capacity for all customers to use streaming video at the same time. But cable companies have a conflict of interest--they are restricting a service that will someday directly compete with Cable TV.

Id.

165. *See* Deborah Solomon, *AtHome Speed Cap Angers Subscribers*, S.F. CHRON., June 30, 1999, at B1.

"To help keep the network running smoothly, the company previously placed a 10-minute limit on the TV-quality video customers can download off the Internet." *Id.* For this reason, concerns that have been raised about legitimate restrictions imposed on the @Home and RoadRunner services to limit video streaming applications are entirely misplaced. Cable Internet service actually *expands* the number of Internet applications available to consumers. Ancillary restrictions on the use of these services, which help manage bandwidth utilization, are entirely reasonable.

166. *See* CISCO STREAMING MEDIA, pp. 9, 12.

The anticompetitiveness of this restriction could not be more striking. While the cable industry itself is not competitive, broadband Internet video services could create competition with cable TV content. If cable TV companies dominate access to broadband, that possibility will be undermined. "For example, a broadband cable provider that has control over the ISPs its customers use might be expected to restrict customers' access to streaming video from competitive content sources, in order to preserve its market of traditional cable video."[167] When cable TV operators restrict the amount or duration of streaming video that consumers may receive over the broadband Internet, they are restraining potential competition. Unlike the relatively poor-quality streaming video over a narrowband connection, broadband-streaming video could potentially compete against cable TV by streaming full video programming to consumers. The private regulation of broadband access imposes restrictions to ensure that broadband Internet services will not undermine the cable TV monopoly: "They are also concerned that a truly open high-speed Internet system will threaten their core video-programming revenues; @Home is required under its contracts with cable operators to limit streaming video clips over its system to 10 minutes in length."[168] The motivation for the

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> Cable operators need to design intelligent networks that can distinguish flows and treat them differently. They can design high-speed data networks that permit control of streaming-media content flow—the flow of incoming content from other networks (the Internet, for example) and flows within the network (to differentiate services). Committed access rate (CAR) is an example of the technologies that are used to control the flow of content into and out of networks. Using CAR, a cable operator can define specific types of traffic and control how much bandwidth they consume.

Id. at 9.

> The cable industry is in a state of rapid transition from the old-world, closed-system that offers broadcast television to a new world driven by competition and choice. Good planning and network design will ensure that streaming-media is not a threat to cable operators, but a new platform for the easy deployment of highly customized and valued on-demand content and services.

Id. at 12.

167. LEMLEY & LESSIG ¶ 58.

168. Werbach.

restriction, while publicly pointing to congestion management, appears to have been privately centered on preventing competition.[169]

Scott Cleland, a prominent telecommunications industry analyst with Legg Mason has succinctly summarized the importance of the strategy to prevent the broadband Internet from posing a competitive threat to the cable monopoly video business. In his view, the leveraging of market power is at least half the story.[170]

The strategy to prevent cable-based broadband Internet from providing a vehicle for competition with cable's core business rests on exclusive deals and limitations on video streaming. Cleland notes:

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169. Richard Tedesco, *Who'll Control the Video Streams?*, BROADCASTING AND CABLE, Mar. 8, 1999, at 22–24.

> Last mile bandwidth constraints can still impede the speed of streamed video to cable households sharing links to cable system nodes. "It's a huge capacity hog," says Wolzien [video media analyst for Sanford Bernstein & Co.].
>
> That's part of the reason that the @Home high-speed cable Internet access service generally restricts video downloads to 10 minutes.
>
> But the cable operators that own @Home established the 10-minute stricture on video streams to prohibit "backdoor" delivery of video signals from networks. "That's obviously designed so that a programmer can't circumvent our channels to put programming on @Home," says Gaurav Suri, director of business development for Comcast Online Communications.
>
> So @Home or third-party content providers can't stream long-form content, although Comcast is streaming Webcasts of concert events itself. Jeff Huber, @Home director of set-top products, calls the clause a "vestige" to insure against digital competition with HBO or Showtime. "They really didn't understand what the evolution of this business was going to be like or what this business was about," says Huber.*Id.*

170. Cleland.

> To date, most of the investment discussion of cable and the Internet has focused on how cable, "the best broadband pipe," can harness the Internet for extraordinary data services growth, and can leverage a ubiquitous residential proprietary facility for a powerful advantage in emerging e-commerce in content, services, and transactions. There has been much less focus on *the other half of the investment story*. Few have extrapolated what the rapid proliferation of Internet-video alliances could mean for competition to cable . . . .
>
> . . . The Internet fundamentally undermines "middleman" roles by allowing consumers to bypass gatekeepers and deal directly with producers. Thus the Internet could enable consumers more control over what they watch, when they watch it, and what they pay for it.

Id.

> Cable's opposition to ISPs gaining equal access to the cableplant means that no Internet player can become a competing video programmer or packager on cable's extremely scarce facility . . . Cable's contracts with @Home/Road Runner expressly prohibit the broadcast of no more than 10 minutes of streaming video which means that no Internet video programming that could directly compete with cable programming can use the cable pipe.[171]

2. RESTRICTIONS ON CONSUMER USE OF THE NETWORK

The restrictions imposed by the proprietary AT&T/cable business model go well beyond limitations on ISPs moving data downstream to consumers. @Home also has restricted the ability of consumers to move data upstream. Recently, @Home changed its service to include a new feature, "ONAdvantage Upstream Enhancement."[172] This change, in effect, prohibits customers from uploading information at a speed faster than 128 kbps.[173] As a result of this "enhancement," customers will no longer be able to host web pages.[174]

While this restriction may be necessary for network management, some question its commercial motivation. Customers have said that although they enjoy @Home's service, they are frustrated by its continual attempts to "impose limits and hide it from subscribers."[175] Other customers are concerned by the "timing" of the change, since @Home recently announced a new program, "@Home Professional," which would allow subscribers to "transmit data at faster speeds."[176]

Proprietary network operators have imposed a series of other restrictions on consumer uses of the network. These include restrictions on setting up servers: "While advertising the

171. *Id*.
172. A copy of the internal @Home memo detailing this service was posted to the comp.dcom.modems.cable newsgroup on June 8, 1999.
173. *See* Solomon.
174. *See id.*
175. *Id.*
176. *See id.*

benefits of being 'always on' the Internet, some providers impose an 'acceptable use' contract that forbids customers from operating an Internet service, such as a web site."[177] Operators have explained that these restrictions have been put in place because Web sites attract a great deal of traffic and there is not the capacity on the network to meet these demands.[178] The access provider, however, is offering a Web site hosting service—creating a conflict of interest.[179] This dichotomy does not present problems for the average customer. It does, however, present problems for "a customer with only a mildly ambitious Web site."[180] This customer "will exceed the parameters of the bundled service and fees for extra storage space and high traffic volumes add up rapidly."[181]

A second restriction precludes the establishment of local area networks. The number of households with "two or more computers interconnected by a home network" is increasing.[182] Soon, we will see home networks connecting "television sets, household appliances, and many other things."[183] Access providers, however, claim that they do not have the technical capability for this type of network.[184] Yet the technology for a home network of this kind was developed in the 1970's.[185] One commentator suggests that "[i]n refusing to attach home networks, providers are actually protecting their ability to assign the

177. Saltzer.
178. *See id.*
179. *See id.*
180. *Id.*
181. *Id.*

> Some providers have adopted a more subtle approach: they refuse to assign a stable Internet address to home computers, thereby making it hard for the customer to offer an Internet service that others can reliably find. And some access providers have placed an artificial bottleneck on outbound data rate, to discourage people from running Internet services.

182. *Id.*
183. *Id.*
184. *See id.*

network address of the customer. By refusing to carry traffic to Internet addresses they didn't assign, the access provider can prevent the customer from contracting for simultaneous service with any other Internet access provider."[186]

This practice not only hurts the consumer, but it also creates problems for future innovation. For example, "this cost to innovation is the uncertainty that is created for future applications of broadband technology."[187] One application hampered by this practice depends "on the Internet being 'always on.'"[188] These new applications "would allow the net to monitor home security, or the health of an at-risk resident."[189]

There are two consequences of cable control of broadband access to the Internet.[190] The first, and most damaging, consequence of cable control is the restraint of "innovation and experimentation that has been central to the Internet explosion."[191] Second, cable companies will control "network services; voice, data, and video distribution and a material part of the video content as well as much of the services and Internet content delivered through the cables."[192] These problems are caused by a monopoly of access and ISP service.[193]

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185. *See id.*
186. *Id.*
187. LEMLEY & LESSIG, ¶ 60.
188. *Id*.
189. *Id.*

> Whether, as a software designer, it makes sense to develop such applications depends in part upon the likelihood that they could be deployed in broadband cable contexts. Under the End-to-End design of the Internet, this would not be a question. The network would carry everything; the choice about use would be made by the user. But under the design proposed by the merged company, AT&T affiliates would have the power to decide whether these particular services would be "permitted" on the cable broadband network. Cable has already exercised this power to discriminate against some services. They have given no guarantee of non-discrimination in the future. Thus if cable decided that such services would not be permitted, the return to an innovator would be reduced by the proportion of the residential broadband market controlled by cable.*Id.* ¶61.

190. *See* Bar et al., *supra* note 14.
191. *Id.*
192. *Id.*
193. *See id.*

4. CONCLUSION

In short, cable operators have encountered the creative power of the Internet and find it troubling. If customers try to use the broadband Internet in creative ways, AT&T/@Home can and does shut them off. The very essence of what has been so attractive about the Internet—the empowerment of consumers as users and speakers—is a nuisance to @Home and contradicts the business rules it wants to put on the broadband Internet.[194] These examples underscore a fundamentally important point in the debate over open access. Activity in the content market is already being retarded by the AT&T/Cable policy of exclusion. High-speed services are not being delivered by independent ISPs. Streaming video is not being delivered to consumers to compete with cable's core monopoly service. Consumers have been stopped from sending data upstream. Costs are already being imposed on the public.[195]

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194. *See id.*

> Customers have found a plethora of ways to abuse the network, Wolfrom [an At Home spokesman] says, including setting up File Transfer Protocol servers, mass e-mail businesses and gaming. In a few cases @Home subscribers have set themselves up as Internet service providers using the company's high-speed access pipes.
>
> "We've got people reselling our bandwidth to consumers as a dial-up service," Wolfrom says. While analysts agree that abuses are going on, they also say that downgrading the service may not be the best defense.
>
> "The providers are having second thoughts about their service because they don't like it that their customers have figured out new things to do with the bandwidth," says Gary Arlen, an independent industry analyst. "At Home does not want people to do this without getting a piece of the market. All the customers should not be penalized for the actions of a few."
>
> Arlen suggests At Home may be trying to push certain high usage customers to more expensive @Work service, a motive Wolfrom dismisses.

Karen J. Bannon, *At Home Builds Local Access Speed Bumps*, *INTER@CTIVE* WEEK, May 24, 1999.

195. *See* LEMLEY & LESSIG, *supra* note 11, ¶ 59.

> AT&T and MediaOne would achieve this change by bundling technologically. The consequence of this bundling will be that there will be no effective competition among ISPs serving residential broadband cable. The range of services available to broadband cable users will be determined by one of two ISPs — @Home and RoadRunner, both of whom would be allied with the same company. These ISPs will

C. BUSINESS LEVERAGE

Open access cannot ignore business reality. If the network owner inserts himself in the relationship between the customer and the independent ISP in such a way as to ensure that its affiliated ISP has a price, product or customer care advantage, then competition between ISPs will be undermined. This gives rise to the third category of discrimination issues, which involves the market layer of social order and is referred to as "business leverage." The market involves primarily the price and quality of service.

Even if independent ISPs are allowed to provide services on technologically fair grounds, the network owner can impose business relationships that make competition difficult, if not impossible. We see four major issues have been identified in the context of the ongoing debate over open access: information, pricing, product bundling, and customer

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control the kind of use that customers might make of their broadband access. They will determine whether, for example, full length streaming video is permitted (it is presently not); they will determine whether customers might resell broadband services (as they presently may not); it will determine whether broadband customers might become providers of web content (as they presently may not). These ISPs will have the power to discriminate in the choice of Internet services they allow, and customers who want broadband access will have to accept their choice. Giving this power to discriminate to the owner of the actual network wires is fundamentally inconsistent with End-to-End design. *Id.* ¶ 52.

The first is the cost of losing ISP competition. As we have argued, one should not think of ISPs as providing a fixed and immutable set of services. Right now ISPs typically provide customer support, as well as an IP address that channels the customer's data. Competition among ISPs focuses on access speed, as well as some competition for content. *Id.* ¶ 55.

The second cost is the risk that legacy business models will improperly affect the architecture of the net. Broadband is a potential competitor to traditional cable video services. Traditional cable providers might well view this competition as a long term threat to their business model, and they may not want to change to face that competitive threat. By gaining control over the network architecture, however, cable providers are in a position to affect the development of the architecture so as to minimize the threat of broadband to their own video market. For example, a broadband cable provider that has control over the ISPs its customers use might be expected to restrict customers' access to streaming video from competitive content sources, in order to preserve its market of traditional cable video. *Id.* ¶ 58.

The third cost of such control by a strategic actor is the threat to innovation. Innovators are less likely to invest in a market where a powerful actor has the power to behave strategically against it. Innovation in streaming technologies, for example, is less likely when a strategic actor can affect the

relationships. Some questions to consider when discussing these issues are: (1) How will information about the flow of data be used by network owners?; (2) Do prices squeeze competitors, or force them to subsidize the proprietary content or facilities of the network owner?; (3) Are customers given effective choices in pricing options or products?; and (4) Are independent ISPs given an opportunity to establish customer relationships on an unfettered basis?

1. INFORMATION

In order to effectuate the service prohibitions discussed in the previous section, the network owner must engage in intensive monitoring of individual activity and gathering of information. The proprietary network owner must identify flows of data that may violate its business rules and contractual conditions. It must identify which ISP or customer is doing so, and cut them off. Needless to say, this raises privacy concerns, which are outside the scope of our analysis. It also raises business and competitive concerns—our primary focus. The gathering of so much information places the network owner in a powerful position *vis-à-vis* competitors and consumers.

The detailed control of the network confers an immense information advantage on the system operator. Because of the conflict of interest created by the vertical integration of facilities and content, the potential for competitive abuse of information is substantial. This advantage is evident to those in the industry. For example, a Cisco document suggests the following: "As new applications emerge, cable operators can capitalize on innovation by monitoring network usage and developing service around these applications. The Cisco

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selection of streaming technologies, against new, and competitive systems.*Id.* ¶ 59.

Systems NetFlow technology is an example of the products that exist today that can monitor traffic patterns and technology in detail."[196]

Cisco's enthusiasm as a vendor of equipment is echoed by other participants in the industry:

> If you have in one place all of the information about the particular customer and the usage of that customer, or how often that customer uses all of the particular services he or she is buying from you, you can be a lot more sophisticated in identifying clients that are most likely to churn. A truly convergent billing process allows you to communicate with your customers more effectively.[197]

2. PRICING

The squeeze placed on independent programmers and service providers by the closed business model is apparent. By controlling a bottleneck, network owners can place price conditions on independent content providers, undermining their ability to compete. Consumers will have to pay twice the price for Internet access—half of the price to AT&T's affiliate and half the price to the independent ISP of the consumer chooses. Therefore, the cable companies are continually trying to retain control of the cable lines, while refusing to share access with other Internet providers. Here is an example of the tone of cable companies: "We'll send you the Internet services—e-mail, home banking, etc.—that we designate, and you'll send us a bigger check. If you want a different Internet service provider, fine—just send them a check, too."[198]

Leveraging control over the bottleneck infrastructure is the key to exercising market power and capturing the available economic rents. A *New York Times* article explained this

196. CISCO STREAMING MEDIA, *supra* note 12, at 9.

197. M.J. Richter, *Everything's Coming Up Convergence*, TELEPHONY, June 28, 1999, at 30 (quoting Rich Aroian, vice president of marketing and strategic alliances, Saville Systems).

198. Dan Gillmor, *AT&T Deal No Help to Consumers*, SAN JOSE MERCURY NEWS, May 6, 1999.

practice: "[T]he companies that control the assets . . . also reap most of the profits. It is very difficult to generate long-term success in the communications business by leasing communications capacity from others. . . ."[199]

Offering "one click access" to the Internet without a price difference forces independent service providers to subsidize the content of the affiliated ISP. AT&T has now offered to make transport services available at a price that is, presumably, less than it charges its customers for transport and content. That price remains to be negotiated, however, and their principles for arriving at a reasonable price are not stated. Moreover, AT&T's offer of transport service to the Internet appears to require independent ISPs to pay for all of the facilities between the customer and the internet, whether or not they want to use those facilities. The potential for cross subsidy and discrimination is shifted, not eliminated, by this concession.

Beyond the issues of price squeeze and cross-subsidization, the technology and business model may seek to impose a new form of pricing on consumers. The current cable broadband architecture is accompanied by a strategy to end "flat-rate pricing" to the internet. For example, in advertising its NetFlow software tool, Cisco promised that "cable operators can break through the flat rate pricing model and bill for the true value of services used."[200]

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199. Seth Schiesel, *Start-Up Leads Phone Cause in Battle for Internet Access*, N.Y. TIMES, May 17, 1999, at C-4. Schiesel also provided an example of this practice:

> AT&T is pursuing much the same strategy, but using cable television systems rather than traditional phone lines. When America Online and other Internet service providers complain that AT&T will not have to offer use of its cable systems to other Internet service providers, what they really fear is the prospect that AT&T will sell access to those systems at prices that keep the bulk of the profits for itself.

Id.

200. CABLE FOR A NEW WORLD: A CABLE PROVIDER'S GUIDE TO DIGITAL BROADBAND DEVELOPMENT (Cisco Systems, 1999).

Industry analysts have the view that the "New World Internet Business Model" will change the way services are billed.[201] Network providers will be successful in the future if they are able "to process network information" and "to provide internal capabilities like, dynamic activation, real time accounting and collection," and response times for micro-transaction services that are less than a millisecond.[202] These practices will allow providers to charge on a pay as you go basis: "The potential exists to transcend the 'pay as you go' state with true 'pay per use' applications and services. . . Paramount among these is the necessity to move to transactional processing as opposed to the traditional time and usage methods."[203]

The intersection of technology and the business model, evident in the area of discriminatory access for preferred providers is also evident in the area of pricing. New technology will also come at a higher price: "'Enhanced services aren't worth doing unless there is a way to bill for them,'"[204] says John Coons, an analyst at Dataquest. In the future, it will be difficult to get unlimited access for forty dollars per month.[205] It would be impossible to charge one rate, therefore, consumers will likely be billed for the services they use.[206] This method of billing has not yet been developed, but it is in the works: "Cisco has created an IP billing initiative with Hewlett-Packard that aims to solve the problem more elegantly. . . [by letting] voice-over-IP and other broadband services be billed the way telcos prefer."[207]

Because AT&T reserves the right to negotiate the pricing relationship between independent ISPs and the customer, it could use that leverage to ensure that this new form of

201. *See* CISCO.
202. Howard Hecht, *Big Fast Nets Not Enough,* ANALYSTS ALLEY: TECHWEB, June 9,.
203. *Id.*
204. New Net, p. 186.
205. *See id.*
206. *See id.*

pricing is imposed on the public. In addition, it could preclude independent ISPs from using forms of pricing that threaten its preferred approach.

3. PRODUCT BUNDLING

For an incumbent monopolist selling video "broadcast" services and planning to sell bundles of "broadband services," a fundamental issue arises concerning what independent ISPs will be allowed to sell services and how consumers will be allowed to buy services. The cable TV's bundling of programming has long been a source of concern. If cable owners leverage bundles with Internet and cable service, independent ISPs will be at a severe disadvantage.

The Cisco Systems *White Paper,* describing its cable-oriented network equipment affirms this point: "By offering both on-demand services and broadcast services, cable operators can effectively differentiate themselves from competing providers who can offer only on-demand delivery . . . or who can offer only broadcast services over large footprint. . ."[208]

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207. *Id.*

208. CISCO STREAMING MEDIA, *supra* note 12, at 1.

> Although Cisco is trying to sell systems to cable operators, this sharp difference between telephone company wideband and cable broadband has been noted by disinterested parties as well. For example, a much more "academic" document published by Cisco a couple of years earlier offered the following observation on the advantages of cable systems for residential broadband service.
>
> GEORGE ABE, RESIDENTIAL BROADBAND 155, 283 (Cisco Press, Macmillan Publishing, 1997).
> Cable Networks have the early lead over telephone companies and other service providers in offering broadband services in the home. Cable TV networks have speed, ubiquity, and experience in offering residential services, especially television. These advantages make it possible to offer digital and high-speed Internet access to millions of consumers quickly over the existing network. . .
> Unlike HFC, xDSL, and even VDSL, are not competitive with broadcast digital TV. ASDL does not have the bandwidth nor the coverage to compete for cable for video. The main use of video over DSL is for video on demand or near video on demand, neither of which has proven sufficient to justify massive infrastructure capital costs. **[Same source/direct quote?]**

What Cisco touts as a marketing opportunity becomes a point of contention in the relationship between independent ISPs and vertically integrated owners of facilities. Cisco sees "competetive advantages in "the package of services created, advantages in pricing those services, and advantages in a single bill," advantages that may discourage customers from switching.[209] Cisco also doubts that competitors can come up with equivalent alternative bundles: "This of course futher increases restistance to switching one component of the bundle—broadband access—to an alternate supplier."[210]

In addition, there are no limits placed on companies such as AT&T—it could bundle everything under its control.[211] Because of AT&T's limitless expansion, it may also be able to control the expansion of independent ISPs and "foreclose all competition in an increasing range of services provided over broadband lines."[212] This control would have a considerable effect on consumers' choices: "These ISPs will have the power to discriminate in the choice of Internet services they allow, and customers who want broadband access will have to accept their choice."[213]

4. CUSTOMER RELATIONSHIP

AT&T's approach to proprietary control of the network also allows the facility owner to determine the relationship between the customer and the independent ISP. AT&T demands the right to negotiate the most important business relationships between customers and service providers—marketing, billing, and product presentation.

209. Bar et al.
210. *Id.*
211. *See* LEMLEY & LESSIG, ¶ 51.
212. *Id.*
213. LEMLEY & LESSIG, ¶ 52.

While AT&T will allow independent ISPs to market to cable customers who have not designated an ISP, AT&T requires the ISP to negotiate with AT&T how that will take place, stating that the opportunity to market must be "through means mutually agreed upon." It is not clear that independent ISPs would be allowed to compete for AT&T's internet customers.

In other words, AT&T has not offered to negotiate the terms and conditions of a commercial relationship with independent ISPs in which it provides for the transport of data from customers to that ISP. It wants to control the fundamental relationship between the independent ISP and the customer. AT&T retains the primary relationship with every customer. Before any consumer can become a customer of an unaffiliated ISP for broadband Internet, he or she must first become a customer of AT&T, preserving the ability to package internet service with cable service and leveraging the fact that consumers are the captives of the cable company.

Under these circumstances, AT&T maintains a huge advantage in marketing to customers. For example, AT&T seeks to control the initial boot screen, which "is like prime real estate and advertising space."[214] Control of the boot screen ensures that the direct relationship is with the transmission service provider.[215] AT&T insists that the customization

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214. Gillmor, p. 151. The AT&T model provides an example of this practice:

> AT&T also controls @Home Network Inc., the Internet service provider to which AT&T cable customers are forced to subscribe if they want high-speed data access via the cable lines. MediaOne is co-owner of a weaker cable-Internet provider, RoadRunner, and it's safe to assume that @Home will eventually be the cable-Internet service provider for the MediaOne customers, too. Most likely, RoadRunner itself will become part of @Home before long.
>
> AT&T and other cable companies understand the power of owning the first screen of digital information. It's the front page to the digital world—an enormous asset in selling customers' attention to advertisers and other companies.

215. *See* Werbach, *supra* note 91.

> @Home controls the cable modem in the user's home and functions as the service provider. Users cannot pay a reduced fee for the high-speed pipe alone; they must purchase the @Home ISP and

of the boot screen be negotiated, so that AT&T may retain control over the independent ISP. @Home has not made even that concession.[216]

Control of the boot screen also ensures that the direct relationship is with the transmission service provider.

> @Home controls the cable modem in the user's home and functions as the service provider. Users cannot pay a reduced fee for the high-speed pipe alone; they must purchase the @Home ISP and content offerings. Even if a user pays for another ISP's services on top of the @Home subscription fee, the primary customer relationship is still with @Home. Independent ISPs such as MindSpring and Earthlink have no control over the user's connection setup and thus cannot compete on customer service or reliability. @Home has been the focus of the most attention because of the AT&T/TCI merger, its extensive use of local caching and its larger user base.[217]

> There is clearly a range of strategies available for the provider of a large cable modem network to "bias" Internet access to the advantage of some content over others. Though some may be intelligent ways to speed up the Internet experience for customers (dynamic caching is a good example), these practices could easily become abuses of dominant position if applied differentially to different service and content providers. Indeed if a single ISP, in this case AT&T/@Home, has sole access to these strategies, it can systematically shape what content and services get to the end-users under optimal conditions. Worse, it could shape the very terms of innovation on the Internet, deciding who gets to experiment and who can capture the resulting benefits. Open access would assure that other ISPs could use the cable infrastructure to pursue similar approaches, and would foster healthy competition of network applications, programming and architecture.[218]

> In the case of cable broadband, however, the architecture does disable the relevant competition. One simply cannot choose a competitor ISP as the primary ISP in the cable broadband architecture, and thus one cannot choose a competitor to provide the primary ISP services. (74)

> AT&T argues that this competition is not disabled by the cable broadband architecture, since a customer can always "click-through" to a non-cable ISP. But the

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content offerings. Even if a user pays for another ISP's services on top of the @Home subscription fee, the primary customer relationship is still with @Home. Independent ISPs such as MindSpring and Earthlink have no control over the user's connection setup and thus cannot compete on customer service or reliability. . . . @Home has been the focus of the most attention because of the AT&T/TCI merger, its extensive use of local caching and its larger user base.

216. Gillmor, Dan, "AT&T Deal Provides No Help to Consumer," *Mercury Center*, May 5, 1999.

217. The Architecture, p. 4.

218. Barr, et al.

> ability to click through provides just a fraction of the services that a competitor ISP might potentially provide. It would be as if competitor browsers on the Windows platform performed just 30% of the functions that they performed on other platforms. Further, click-though may be economically irrational even if it is technically feasible, just as Microsoft's original "per processor" license made it nominally possible but extremely unlikely for an OEM to load two operating systems onto a computer. Thus the question in this matter is not whether a user will take the time to "download" another ISP connection; there's no such download possible. The architecture ties the user to AT&T/MediaOne's ISP; users cannot cut that knot. (75)[219]

This model of private regulation will squelch the most vital characteristic of the broadband Internet. It allows the least competitive component of the industry, ("last mile" facilities), to be leveraged against the most competitive (content).

219. Lemley and Lessig.

VI. PUBLIC POLICIES TO ENSURE OPEN COMMUNICATIONS NETWORKS

Having identified the sources of discrimination, we turn to solutions. We derive the solutions by reviewing what AT&T and AOL asked for as unaffiliated entities. We compare this to what they have offered as dominant, cable network owners.

A. THE GOAL OF OPEN ACCESS: VIGOROUS COMPETITION AND VIBRANT CIVIC DISCOURSE

While AT&T and AOL demanded a great deal as outsiders of the cable TV industry, they have offered much less now that they are the dominant insiders in the industry. To articulate the nature of open access, it is helpful to start with a clear view of what has been achieved on the narrowband Internet and an eye on the public interest purposes of open access policy. The narrowband Internet infrastructure in this country is operated in a fastidiously open manner based on three sets of policies.

- The architecture of the Internet is based on open standards and end-to-end principles.
- The communications infrastructure on which this network architecture is built is operated on a nondiscriminatory, common carrier basis with few technological constraints in accommodating all of the demand for interconnection.
- Policy makers have adhered to (or been forced to adhere to) a strict regime of open communications.

Because of these policies, "proprietary" restrictions on or governmental intrusions into the flow of information have been minimized, if not eliminated. Consumers and service

providers have achieved a high degree of freedom in reaching the Internet and, therefore, each other. Any (and therefore every) Internet Service Provider (ISP) has access to the network on the same rates, terms and conditions as every other similarly situated ISP and the network is operated in a manner that does not discriminate between ISPs. Any (and therefore every) consumer has the ability to reach every other consumer or ISP without restriction.

The result is a remarkable flowering of communications, commerce and creativity. Open access to the communications network has resulted in vigorous competition to provide service to consumers. This unprecedented openness of communications has combined with the relative ease of production and distribution of information to create uniquely rich and diverse civic discourse.

As the broadband Internet becomes the primary platform for electronic commerce and the central marketplace of ideas in the "Internet Century," competition and open communications must be maintained. The goal of open access policy should be to preserve openness in the broadband Internet to the greatest extent possible.

Cable companies, who own the networks that are likely to be the dominant communications infrastructure for the broadband Internet for the foreseeable future, claim that network engineering imposes technical limitations on the cable-based broadband Internet that preclude this extreme level of openness. Policy makers should be skeptical of these claims. If the debate over open access to the broadband Internet has proven anything, it has shown that technical limitations are in the eye of the beholder. On man's technical limitation is another man's anticompetitive barrier to entry. Cable systems in other countries (e.g. Canada, Australia and Panama) have demonstrated the feasibility of open access. The "technical

limitations" carved out in the AOL/Time Warner Memorandum of Understanding on open access must not be allowed to create a safe haven for anti-competitive practices. The history of telecommunications reminds us that behaviors and policies loudly declared to be technically impossible at one moment in time are miraculously transformed into readily achievable outcomes in the next moment with a light touch of political pressure.

However, to the extent that there are technical limitations, the correct public policy response should be to:

- Actively work to minimize the technical limitations on access,
- Proactively manage any limitations so as to impose the least restriction possible on open Internet communications, and
- Prevent commercial interests from parading as "technical limitations" and prevent them from embedding and increasing technical limitations through network design decisions.

B. WHAT AT&T AND AOL WANTED

AOL's proposed rule for San Francisco typifies its approach to light handed open access requirements in which the local franchising authority creates the obligation and then allows private parties to work out the details with city enforcement as a backstop.

> *Section 1: Non-discrimination requirements:* Franchisee shall immediately, with respect to this franchise, provide any requesting Internet Service Provider access to its broadband Internet transport services (unbundled from the provision of content) on rates, terms and conditions that are at least as favorable as those on which it provides such access to itself, to its affiliates, or to any other person. Such access shall be provided at any point where the Franchisee offers access to its affiliate. Franchisee shall not restrict the content of information that a consumer may receive over the Internet…

Section 2: Private Right of Action: Any Internet Service Provider who has been denied access to a Franchisee's Broadband Internet Access Transport Services in violation of this Ordinance has a private cause of action to enforce its rights to such access.

Section 3 Enforcement Rights of City and County: In addition to any other penalties, remedies or other enforcement measures provided by Ordinances or state or federal laws, the City and County may bring suit to enforce the requirements of this Ordinance and to seek all appropriate relief including, without limitation, injunctive relief. (AOL, pp. 2-3.)

AOL made essentially the same recommendation to the FCC.

The essence of an open access policy is thus competition, not regulation. Open access would create a competitive check on conduct – a far more preferable option than a behavioral check requiring constant step-by-step scrutiny of a cable operator's dealing with every provider of content or new applications to make sure that the company's conduct doesn't skew its network in favor of affiliated service providers.

This approach does not require imposition of legacy common carrier regulation. The model for such early, targeted safeguarding is drawn directly from the existing cable regulatory framework, but its policy foundation cuts across all FCC regulation. Any cable television system operator that provides any Internet service provider access to its broadband cable facilities would have to provide a requesting ISP comparable access to its facilities on rates, terms, and conditions equal to those under which it provides access to its affiliate or to any other person. (AOL, FCC, p. 14).

Commenting before a federal body with much broader regulatory powers, AT&T proposed a much more vigorous regime of regulation.

Given the incentives and opportunities available to broadcast carriers to abuse their market power and control over bottleneck facilities, AT&T Canada LDS has recommended the adoption of a number of safeguards in order to prevent instances of anti-competitive behaviour…

1) implementation of a cost based price floor to protect against below cost pricing of broadband access services;

2) implementation of a cost-based price ceiling with a limited mark-up to prevent excessive pricing of access services in uncontested markets;

3) implementation of a third party access tariff, allowing for non-discriminatory and unbundled access to broadband bottleneck

facilities, as well as comparably efficient interconnection and associated non-price safeguards;

4) implementation of price caps, accounting separations and other safeguards against anti-competitive cross-subsidization; and

5) imputation of appropriate third party access tariffs to value added information services providers by broadcast carriers. (AT&T, p. iii)

It is interesting to note that the provisions of the Telecommunications Act of 1996 to which AT&T points when it demands open access to xDSL in the U.S. are almost identical to the provisions that AOL proposed in the San Francisco proceeding. This makes it quite clear what entities that do not own essential access wires need to enter markets.

> s. 271 (c)(B) COMPETITIVE CHECKLIST—Access or interconnection provided or generally offered by a Bell operating company to other telecommunications carriers meets the requirements of this subparagraph if such access and interconnection includes each of the following:
>
> (ii) Nondiscriminatory access to network elements in accordance with the requirements of sections 251 (c)(3) and 252 (d) (2)…
>
> (iv) Local loop transmission from the central office to the customer's premises, unbundled from switching or other services.
>
> s. 251 (c)(3) UNBUNDLED ACCESS – the duty to provide, to any requesting telecommunications carrier for the provision of a telecommunications service, nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms, and conditions that are just, reasonable and nondiscriminatory in accordance with the terms and conditions of the agreement and the requirements of this section and section 252. An incumbent local exchange carrier shall provide such unbundled network elements in a manner that allows requesting carriers to combine such elements in order to provide such telecommunications service. (Telecommunications Act of 1996)

It is also interesting to note that AT&T embeds the obligation to provide nondiscriminatory access and unbundling into the permanent conditions in the industry structure. That is, it recommends the relaxation of detailed regulation only after vigorous competition develops in both the access market and the adjacent core markets where facilities

owners have market power. However, even after this deregulation, AT&T recommends the continuance of "safeguards to ensure that broadband access services continue to remain available from the telephone [and] cable companies on a non-discriminatory and unbundled basis." (AT&T, p. iii)

> While AT&T Canada LDS considers that forbearance from the regulation of broadcast carrier access and value-added information services is not warranted at this stage in the development of the broadband market, conditional forbearance may be warranted when certain barriers to entry are removed in the cable distribution and local telephony markets. With respect to the broadband services provided by telecom broadcast carriers, the following safeguards should be treated as preconditions to any relaxation of the rules applicable to these carriers:
>
> 1) local competition issues are resolved and the terms and conditions for local entry have been successfully implements such that practical alternatives to the supply of local services exist in the local market;
>
> 2) the broadband tracking requirements established in Decision 95-21 have been implemented and reports from the telephone companies satisfy the Commission that treatment of broadband investment and expenses are appropriate;
>
> 3) price cap regulation has been implemented in such a manner as to preclude telephone companies from recouping broadband investment costs from utility services: and
>
> 4) the establishment of safeguards to ensure that broadband access services continue to remain available from the telephone companies on a non-discriminatory and unbundled basis.
>
> With respect to the broadband services provided by cable broadcast carriers, the following safeguards should be treated as pre-conditions to any relaxation of the rules applicable to these carriers:
>
> 1) a demonstration that vigorous and effective competition has evolved in a substantial portion of the market for broadband access services and in the market for BDU services:
>
> 2) the implementation of an effective price cap mechanism for basic and extended basic services in order to prevent instances of cross-subsidization; and

3) the establishment of safeguards to ensure that broadband access services continue to remain available from the cable companies on a non-discriminatory and unbundled basis. (AT&T, p. ii, emphasis added)

In addition to pricing safeguards, AT&T advocated a number of non-price safeguards to accomplish three general goals of open access.

> Such safeguards are necessary to ensure that competing service providers:
>
> (1) are able to gain comparable access to network bottlenecks; (2) are protected against abuse of confidential information which is provided to the bottleneck access provider; and (3) are not otherwise disadvantaged in the market by the bottleneck access provider through, for example, the negotiation of exclusive or preferential agreements with other service providers. (AT&T, p. 22)

AT&T's regulatory proposal goes far beyond anything being considered for cable operators in the U.S., although wireline telephone companies are subject to exactly this type of regulation in their high speed services. Indeed, as noted, AT&T continues to push for regulation of telephone companies, including their advanced DSL services. In fact, one of the more important implications of the AT&T analysis in Canada is that the cable and telephone industries should be subject to similar obligations. In the U.S. it vigorously defends asymmetric regulation, with its property being unregulated.

Whether through AOL's private negotiations backed up by a public obligation or AT&T's direct regulation, the objectives of both companies were generally the same. The standards by which we should measure the quality of open access are the conditions that AOL and AT&T stipulated that facilities owners should grant to non-affiliated ISPs when they were non-affiliated ISPs themselves.

1. ARCHITECTURE: TECHNOLOGY BIAS

The first source of potential discrimination lies in the architecture of the network. AOL and AT&T had a clear antidote in mind as unaffiliated entities.

> Access: The term "access" means the ability to make a physical connection to cable company facilities, at any place where a cable company exchanges consumer data with any Internet service provider, or at any other technically feasible point selected by the requesting Internet service provider, so as to enable consumers to exchange data over such facilities with their chosen Internet service provider (AOL, p. 2).
>
> There are at least three possible network designs that allow for open access. These include:
>
> Policy-Based Routing, which routes packets to the appropriate ISP using the source IP address as the unique identifier;
>
> Virtual Private Networks (VPNs) and IP tunnels, which create virtual dedicated connections over the HFC network between the customer and the ISP (a solution appropriate to routed (layer 3); and
>
> Point-to-Point Protocol over Ethernet (PPPoE) encapsulation, which is a protocol analogous to commonly employed designs for dial-up (a solution appropriate to bridged (layer 2) access networks).
>
> Each of these options has its own unique set of advantages and disadvantages. The appropriateness of each option varies depending on the type of cable system (i.e. large or small, multiple nodes vs. single node) and the networking architecture being addressed. (AOL, p. 7-8)
>
> Of course, allowing a single entity to abuse its control over the development of technical solutions – particularly when it may have interests inconsistent with the successful implementation of open access – could indeed undermine the City's policy. It is therefore vital to ensure that unaffiliated ISPs can gain access comparable to that the cable operators choose to afford to its cable-affiliated ISP. (AOL, p. 8).
>
> Of course, it is implicit in the open access resolution that non-discriminatory access for multiple ISPs extends to all relevant aspects of the technical and operational infrastructure, so that all business system interfaces will be open to all ISPs and performance levels will not favor the affiliated ISP. (AOL, p. 7)
>
> It is important to confirm that the cable operator must provide equal treatment for local content serving (caching or replication) that the affiliated and nonaffiliated ISPs can provide, specifically, no firewalls, protocol masking, extra routing delays or bandwidth restrictions may be imposed in a discriminatory manner. (AOL, p. 9)

AT&T uses the term Comparably Efficient Interconnection (CEI) to describe interconnection in the broadband market.

> More specifically, in order to effectively compete with broadcast carriers in the provision of non-programming services, competitors must be able to provide end users with equivalent services at equal or lower prices. Therefore, in providing non-discriminatory access to their broadband networks, broadcast carriers must allow competitors to access their broadband distribution network in the most efficient manner possible. For example, competitors must have the option to specify the point of interconnection as either the headend, the drop, inside wire, or any combination thereof. This concept is known as Comparably Efficient Interconnection (CEI) and refers to the principle of providing competitors with access to the broadband network on terms that are technically and economically equivalent to those provided by the broadcast carrier to itself. Under CEI, the interconnection provided must be equivalent in terms of scope, quality and price but may vary by type of competitive entity. (AT&T, pp. 25-26)

AT&T also expressed a concern about standards and their management.

> To the extent that standards are developed for interfacing with broadband access services, the carriers who provide these services should not be permitted to implement any non-standard, proprietary interfaces, as this would be contrary to the development of an open network of networks. In addition, any new network or operational interface that is implemented by a broadband access provider should be made available on a non-discriminatory basis. (AT&T, p. 23).

The ability to deploy facilities to ensure and enhance the quality of service will be particularly important in the third generation of Internet service development. The multimedia, interactive applications that will distinguish the next phase of the Internet are particularly sensitive to these aspects of quality, much more so than previous applications.

2. NORMS: SERVICE RESTRICTIONS

The second source of potential discrimination involves behavioral norms.

> In a last mile shared environment, proper network and bandwidth management might possibly require certain limitations on data transmission. However, content- or service-specific restrictions can be both over- and under-inclusive – and most of all, anticonsumer. Limitations on video streaming, for example, protect cable's traditional video programming distribution business. TCI admitted early on, its 10-minute cap is a "restriction which we imposed on @Home so that we were the

> determiner of how stream video works in our world… [and] so that [we] determined [our] future in the area of streaming video. Any legitimate network management policies must be free of such anticompetitive intent and effect. (AOL, p. 10)

3. BUSINESS REALITY

Open access cannot ignore business reality. AT&T and AOL sought to eliminate the advantages the network owner might have. Control of information was addressed by AT&T in Canada.

> Confidential treatment of information provided by service providers to broadband access carriers that are vertically-integrated… Broadband access providers that are affiliated with or have joint marketing arrangements with broadband service providers should also be required to enter into non-disclosure agreements affording these latter parties the same level of confidential treatment… (ATT, p. 23)

They devoted a great deal of attention to pricing issues. In the context of the more regulatory model advocated by AT&T in Canada, it was able to specify what would constitute reasonable rates. In Canada, AT&T insisted that tariffs be set subject to clear conditions and filed. The central goal was to avoid the problem of cross subsidy.

> Accordingly, the cable companies and telephone companies should be required to file tariffs for approval of their broadband access services and to include in such applications evidence that the rate is compensatory.
>
> Cross-subsidization is an issue for vertically integrated carriers particularly where the broadband service (including access) is not provided on an arm's length basis. The Commission has required telephone companies to maintain an accounting separation for their broadband activities and to provide adequate tracking reports. (AT&T, pp. 19)
>
> In the case of cable companies, the implementation of an appropriately designed price cap regime could provide some protection against cross-subsidization… Furthermore, if in addition to price caps, the Commission considers it necessary to insulate basic cable subscribers from cross-subsidizing cable companies' other broadband activities as common carriers, it could implement accounting separation and tracking requirements for cable companies. (AT&T, p. 22)

AOL worries about AT&T in the U.S. offering "one click access" to the Internet without a price difference. This forces independent service providers to subsidize the content of the affiliated ISP. It wanted wholesale access.

> Provided that the City establishes the right policy – allowing the consumer to choose any ISP they want without being required to pay for or go through the cable-affiliated ISP – then there are many technical solution available to broadband providers and no need for the City to mandate any particular approach. (AOL, p. 7)

> Broadband Internet Transport Services- The term 'broadband Internet access transport services" means broadband transmission of data between a user and his Internet service provider's point of interconnection with the broadband Internet access transport provider's facilities. (AOL, p. 3)

Beyond the cross subsidy question, in the U.S. the whole idea of a wholesale transport tariff remains up in the air. AT&T has steadfastly resisted the basic idea of entering into commercial relationships with ISPs and allowing the ISP to have the only relationship to the customer.

However, the pricing standards to which AT&T points in its efforts to obtain nondiscriminatory access to xDSL technology from local telephone companies in the U.S. embody these fundamental principles of cost-based, nondiscriminatory prices for unbundled services.

> s. 252 (d) PRICING STANDARDS. –
>
> (1) INTERCONNECTION AND NETWORK ELEMENT CHARGES. – Determinations by a State commission of the just and reasonable rate for the interconnection of facilities and equipment for purposes of subsection (c)(2) of section 251 and the just and reasonable rate for network elements for purposes of subsection (c)(3) of such section –
>
> (A)shall be –

(i) based on the cost (determine without reference to a rate of return or other rate-based proceeding) of providing the interconnection or network elements (whichever is applicable), and

(ii) nondiscriminatory, and

(B) may include a reasonable profit.

(2).. [A] State commission shall not consider the terms and conditions for reciprocal compensation to be just and reasonable unless –

(i) such terms and conditions for the mutual and reciprocal recovery by each carrier of costs associated with the transport and termination on each carriers network facilities of calls that originate on the network facilities of another carrier; and

(ii) such terms and conditions determine such costs on the basis of a reasonable approximation of the additional costs of terminating such calls. (Telecommunications Act of 1996)

As noted above, in Canada AT&T expressed concerns about an incumbent monopolist selling video "broadcast" services or local telephone services and planning to sell bundles of "broadband services." In this regard a fundamental issue arises over what independent ISPs will be allowed to sell and how consumers will be allowed to buy services. Cable TV's bundling of programming has long been a source of concern. If cable owners leverage bundles with Internet and cable service, independent ISPs will be at a severe disadvantage.

AT&T proposed principles to govern bundling raise concerns in two regards. On the one hand, it recommended unbundling of service elements. On the other hand, it recommended that the unaffiliated content provider be allowed to resell (and therefore bundle) the cable programming – i.e., to create a complete bundle.

Because broadcast carriers exercise control over bottleneck facilities, they have both he incentive and the opportunity to bundle these

> facilities with their other services and offer the entire package to their customers for a single price… [T]he Commission concluded that the bundling of monopoly service elements with competitive service elements is generally appropriately subject to three conditions:
>
> 1) the bundled service must cover its cost, where the cost for the bundled service includes:
>
> a) the bottleneck component(s) "costed" at the tariffed rate(s) (including, as applicable, start-up cost recovery and contribution charges); and
>
> b) the Phase II causal costs for components not cover in a) above;
>
> 2) competitors are able to offer their own bundled service through the use of stand-alone tariffed bottleneck components in combination with their own competitive elements;
>
> 3) resale of the bundled service permitted…
>
> In the absence of such a requirement, broadcast carriers will be able to engage in strategic and anti-competitive pricing behaviour arising directly out of their dominant position in the access market. (AT&T, pp. 27-28)

What AT&T had identified as a powerful lever in the marketplace, control over the core product, it sought to neutralize by requiring unbundling and resale.

> AT&T Canada LDS submits that broadcast carriers should not be permitted to bundle their broadcast and telecommunications service until the Commission has established rules which permit the unbundling and resale of BDU services. Furthermore, to the extent that the unbundling and resale of BDU services is tied to entry of the telephone companies into the BDU market, no telephone company should be permitted to bundle BDU service with its local telephone service until all of the issues relating to unbundling and resale of these service have been resolved by the Commission. (AT&T, p. 28)

The question of how and what independent ISPs will be able to market to customers remains a bone of contention between AT&T in the U.S. and the unaffiliated ISPs.

C. WHAT AT&T AND AOL ARE OFFERING

1. THE AOL TIME WARNER PLEDGE

Now that AOL stands to become the owner of a cable network, it has changed its view of open access. AOL says it can be trusted to provide nondiscriminatory access, but the flavor of open access it offers in the Memorandum of Understanding is significantly watered down. The AOL Time Warner commitment can be summarized roughly as follows.

- AOL Time Warner commits to provide consumers a broad choice among multiple ISPs, consistent with providing a quality consumer experience and any technical limitation.
- AOL Time Warner pledges to negotiate commercial agreements with unaffiliated ISPs that will not discriminate in terms of access or operation of the network against ISPs who are not affiliated with AOL Time Warner.

AOL Time Warner offers some details of the non-discriminatory commercial relationship it contemplates.

- Consumers will not have to purchase service from an affiliated ISP in order to obtain broadband Internet access over AOL Time Warner systems.
- Unaffiliated ISPs will be allowed to have the only direct relationship to the customer for broadband Internet service.
- ISPs will be allowed to connect without purchasing broadband backbone transport.

AOL's offer to conduct commercial negotiations will cover nondiscrimination in additional area of commercial relationships and operation of the network including speed of service, marketing commitments, nature of service, tier of service and whether an ISP wishes

to "partner" with AOL Time Warner. AOL Time Warner also recognizes that in addition to nondiscrimination in commercial and operational relationships, there are also potential problems in discrimination against applications and it agrees not to prevent the provision of streaming video by unaffiliated ISPs.

AOL Time Warner appears to recognize the legitimacy of civic discourse goals. AOL has made two commitments in this regard.

- It commits to partnering to promote national, regional or local services in order to facilitate the ability of consumers to choose among ISPs of different size and scope.
- It will not allow selective offering of service that "redlines" a portion of an AOL Time Warner cable system.

Although the AOL Time Warner commitment goes beyond any made by other cable companies, it falls well short of what is necessary to preserve the open communications that has typified the narrowband Internet.

- The policies, terms and conditions offered by AOL Time Warner are inadequate and AOL Time Warner continues to insist that this is all voluntary, which means that there is no effective enforcement mechanisms.
- Details of implementation are totally lacking.
- Without legal enforceability of the agreement its commercial interests make them untrustworthy. AOL Time Warner is shutting competitors out wherever the law does not prevent them from doing so, (e.g. barring GiSCO ads (a regional ISP) wherever it competes with Road Runner, enforcing IM proprietary standards).

2. THE AT&T COMMITMENT

AT&T has offered to provide access to its cable systems to independent ISPs on more restrictive conditions on a "voluntary" basis after the exclusive contracts that its own cable systems signed with @Home expire. Like AOL, AT&T's has made this offer in a number of local and federal venues with increasing publicity over time.[220] The most recent instance attracted a great deal of attention because it was memorialized in a highly publicized "Joint Letter" to Chairman Kennard of the FCC.

- Like AOL, AT&T promises consumers a choice of ISPs, without having to subscribe to an affiliated ISP.
- It promises to offer ISPs a range of internet connections at different speeds and prices with functionality that is comparable to other high speed systems, "subject to any technical constraints particular to, or imposed upon, all ISPs using AT&T's cable system to deliver high-speed Internet access."

The AT&T offer was quite explicit on the question of technical access to the Internet. It guaranteed the following.

- Cable modem service will support Internet protocols and customers will be able to configure the service to support the customers' own choice for a "first screen" and bypass all proprietary content of a network affiliated ISP.

220. See MediaOne, Town of Weymouth's Decision to Regulate Internet Service as a Condition of MediaOne's License Transfer to AT&T To Be Fought by Media One (Oct. 26, 1999).

- Consumers have access to all content and ISPs, subject only to reasonable technical limitation that may be necessary to preserve a reasonable level of service for other customers that are also using the service (i.e., limitations on "bandwidth hogging").

AT&T was less forthcoming on the commercial relationships, however. AT&T will negotiate prices for different levels of speed, but no principles for arriving at a reasonable price and no enforceable assurances about the quality of service are given. AT&T will give independent ISPs the opportunity to offer service to consumers over AT&T's facilities, but it retains immense control over the nature, quality and cost of the services it will allow to be sold and the manner in which they will be marketed to consumers. For example, AT&T declares that any such opportunities will be subject to terms and conditions to be agreed upon by the parties covering

- pricing,
- billing,
- customer relationship,
- design of start page,
- degree of customization,
- speed,
- system usage,
- caching services,
- co-branding ancillary services,
- advertising and e-commerce revenues, and
- infrastructure costs.

AT&T will allow independent ISPs to market to cable customers who have not designated an ISP. However, AT&T requires the ISP to negotiate with AT&T how that will take place by stating that the opportunity to market must be "through means mutually agreed

upon." It is not clear that independent ISPs would be allowed to compete for AT&T's Internet customers.

AT&T's commitment is most instructive, not because of its definition of open access, but by identifying a large number of commercial issues that must be resolved if open access is to be commercially meaningful. Table 1 presents the major categories of discrimination that must be addressed to create an effective open access policy.[221] The following discussion focuses on the broad principles that should govern open access, only a few of which have been met by AOL and virtually none of which have been met by AT&T.

D. POLICY AND ENFORCEMENT: WHAT COMMUNICATIONS NETWORKS REQUIRE TO REMAIN OPEN

1. NON-DISCRIMINATORY ACCESS

Public policy should start with a ban on discrimination.

The Any Principle: Network owners shall provide any requesting Internet Service Provider access to its broadband Internet transport services (unbundled from the provision of content) on rates, terms and conditions that are at least as favorable as those on which it provides such access to itself, to its affiliates, or to any other person.

221. In order to analyze the complex issue of nondiscriminatory access to the broadband facilities, CFA has adopted the analytic approach presented in Table 1. It identifies four broad areas of concern and about two dozen specific practices. The framework for analysis is based on the paradigm presented by Lessig, "Creating Open Access to the Broadband Internet," *Briefing: Can We Preserve the Internet as We Know It? Challenges to Online Access, Innovation, Freedom and Diversity in the Broadband Era* (Dec. 20, 1999) and "Open Access to the Broadband Internet: Overcoming Technological and Economic Discrimination in Proprietary Networks," *University of Colorado Law Review*, forthcoming.

EXHIBIT VI-1
POLICY, TECHNICAL AND ECONOMIC SOURCES OF DISCRIMINATION IN PROPRIETARY BROADBAND NETWORKS

LAW: POLICY AND PROPRIETARY CONTROL

BANNING DISCRIMINATION
- Available Terms

ISP ACCESS
- Number
- Diversity

ENFORCEMENT
- Private Right of Action
- Public Enforcement

ARCHITECTURE: TECHNOLOGY BIAS
- Minimizing Limitation

TECHNICAL NEUTRALITY
- Standards for Limitation
- Competitively neutral

INTERCONNECTION
- Comparably Efficient
- Change Management

STRUCTURE
- Non-discriminatory Access

FLOW
- Access to:
- Operation support (bit rate etc.)
- Operation Support Systems

NORMS: SERVICE RESTRICTIONS

PROVIDERS/CONSUMERS
- Protected Characteristics
- Availability of Terms

MINIMIZE LIMITATIONS ON
- Upstream traffic
- Server set-up
- Local area networking

THE MARKET: BUSINESS LEVERAGE

INFORMATION GATHERING
- Confidentiality

PRICING
- Pay Once
- Commercial Transport

PRODUCT BUNDLING
- Unbundling (resale)
- Prohibition on X-subsidy

CUSTOMER RELATIONSHIP
- Direct relation to customer
- Boot screen freedom

2. ISP ACCESS

How many ISPs will be allowed access? AOL Time Warner will not commit to a number of ISPs that will be made available. Therefore, there is no way to know whether there will be either effective competition or open communications on its network. AT&T has said that it will make access available to the five or six largest commercial ISPs in an area. AT&T intends not only to control the marketing opportunity, but it intends to offer it to a small number of the most popular ISPs. As AT&T CEO Michael Armstrong put it:

> We are motivated by self interest and greed just like they are. And so if I go down to, I don't know, Austin—and I'm making this up—there's a UnviersityofTexasnet.com I.S.P. that really has captured a good part of that market, and I really wish to sell as much of my data services over this infrastructure as I can, then having that very popular I.S.P. only infrastructure is the way that I can gain new subscribers.[222]

These commitments do not even begin to deliver the competition and diversity that we enjoy on the narrowband Internet.

The number of ISPs that can gain access to the system is critical and can vary widely -- a few, some, many, most, all. Therefore, we propose the following principle.

Competition: The network operator shall support as many ISPs as technically possible and shall commit to the research, development and deployment of technologies to maximize the functionalities available and the number of ISPs that can be supported by the network.

The number of ISPs is one critical issue. The type of ISPs that can gain access is also important. Once one abandons the "any ISP" principle, the question of which services will be able to gain access to the network on commercial terms (not just because of discrimination)

222. Seth Schiesel, *For AT&T's Chief, a Redefined Cable Landscape*, N.Y. TIMES, Jan. 16, 2000, § 3, at 1.

also becomes a concern. Therefore, open access policy should make a broader commitment to diversity and discourse.

Diversity: The network operator should ensure that at least one unrestricted ISP is available on its network and shall endeavor to make access for local and noncommercial ISPs available in proportion to network capacity.

3. ENFORCEMENT

The word "any ISP" used in the context of open access is a very powerful word. Once a network owner invokes proprietary control over the network into negotiations and removes the word any, a host of problems arises. Under the voluntary approach now espoused by AT&T and AOL Time Warner, there is no recourse. If it discriminates in implementation, there is nothing that private parties or government entities can do about it, except, perhaps file and antitrust case.

How do we police the offer of rates, terms and conditions? Since these are private negotiations, no unaffiliated ISP has any idea of what rates, terms and conditions have been offered to any other ISP. How does any ISP know that the offer it has been made is not discriminatory? How does an ISP enforce its rights, if nondiscriminatory terms are offered but not delivered?

For these reasons, we believe that a private right of action backed up with potential governmental enforcement is the preferred approach to ensuring open access to the broadband Internet. We refer to this as the "any" principle.

Legal Rights: Any ISP should have an enforceable right of action to seek injunctive relief from discrimination.

Governmental Rights: Government agencies (antitrust, regulatory) should have a right to prevent discrimination on their own motion.

E. ARCHITECTURE: TECHNOLOGY BIAS

1. IDENTIFYING AND MANAGING TECHNICAL LIMITATIONS

If there are technical limitations, who decides what they are and how do we monitor their implementation? For example, AOL Time Warner commits to allowing streaming video. What happens if it determines that only one video stream is possible and AOL Time Warner's affiliate got there first? A "technical limitation" may eliminate choice for consumers and act in favor of the AOL Time Warner affiliate.

However, to the extent that there are legitimate technical limitations, the correct public policy response should be.

Minimizing technical limitations: Network owners should actively work to minimize the technical limitations on access and proactively manage any limitations so as to impose the least restriction possible on open Internet communications, and

Technical Neutrality: (1) Technical limitations must be demonstrated by some agreed upon standard. (2) Implementation of measures deemed necessary to enforce technical limitations should not discriminate between affiliated and nonaffiliated ISPs.

2. PRINCIPLES OF NON-DISCRIMINATION

In order to ensure technological non-discrimination a number of principles must govern the relationship of the ISP to the network owner.

Comparably efficient interconnection: In providing non-discriminatory access, network owners must allow competitors to access their broadband distribution network in the

most efficient manner possible on terms that are technically and economically equivalent to those provided by the network owner to itself or affiliates or partners in terms of scope, quality and price. It must provide the option to make a physical connection at any place where a cable company exchanges consumer data with any Internet service provider, or at any other technically feasible point selected by the requesting Internet service provider,

Non-discriminatory change management: To the extent that standards are developed for interfacing with broadband access services, the network owners who provide these services should not be permitted to implement any non-standard, proprietary interfaces, as this would be contrary to the development of an open network of networks. In addition, any new network or operational interface that is implemented by a broadband access provider should be made available on a non-discriminatory basis.

Access to infrastructure: It is vital to ensure that unaffiliated ISPs can deploy and gain access comparable to that the network owners afford to their affiliated ISP.

Operational support and operating support systems: Non-discriminatory access for multiple ISPs extends to all relevant aspects of the technical and operational infrastructure, so that all business system interfaces will be open to all ISPs and performance levels will not favor the affiliated ISP. It is important to confirm that the cable operator must provide equal treatment for local content serving (caching or replication) that the affiliated and nonaffiliated ISPs can provide, specifically, no firewalls, protocol masking, extra routing delays or bandwidth restrictions may be imposed in a discriminatory manner.

F. NORMS: SERVICE RESTRICTIONS PROVIDERS/CONSUMERS

In a last mile shared environment, proper network and bandwidth management might possibly require certain limitations on data transmission. However, content- or service-specific restrictions can be both over- and under-inclusive--and most of all, anticonsumer. Any legitimate network management policies must be free of such anticompetitive intent and effect.

AOL Time Warner adopts a narrow definition of discrimination that identifies affiliation and one functionality (streaming video) as a criteria which will not be the basis for discrimination. AT&T gives no assurances about any specific characteristics.

The "any ISP" principle of the narrowband Internet affords much broader protection against discrimination. If network owners exercise proprietary control through negotiations, the definition of excluded discrimination must be broader.

Protected Characteristics: The network owner should place no limits on or provide favorable treatment to ISPs--based on affiliation, content, applications, functionality or type--in making service available to users or in allowing users to reach the Internet.

Both the AT&T and the AOL Time Warner commitment open the door to market foreclosure based on permissible (not "undue") discrimination. The commercial negotiations contemplate differences between ISPs. How much "due" discrimination will be tolerated? If network owners establish a huge discount for very large ISPs and its affiliate is the only entity that qualifies, choice has been eliminated and competition may be chilled.

Will ISPs be able to find rates terms and conditions that suit their needs, or will AT&T/AOL Time Warner only make a very restricted set available? If the affiliated ISP does

not need certain speeds, or tiers of service, then it can meet its non-discrimination pledge by simply not making them available to anyone.

Availability: Network owners should make access available on a variety of terms and conditions to meet the needs of ISPs of different types who have different needs for interconnection.

G. BUSINESS LEVERAGE

Open access cannot ignore business reality. If the network owner inserts himself in the relationship between the customer and the independent ISP in such a way as to ensure that its affiliated ISP has a price, product or customer care advantage, then competition between ISPs will be undermined. This gives rise to the third category of discrimination issues, which involves the market. The potential anticompetitive problem is the abuse of business leverage.

1. INFORMATION

Confidential treatment of information: Broadband access providers that are affiliated with or have joint marketing arrangements with broadband service providers should also be required to enter into non-disclosure agreements affording these latter parties the same level of confidential treatment.

2. PRICING

The most critical business issue is a potential price squeeze that can be placed on independent programmers and service providers by the closed business model. By controlling a bottleneck, network owners can place price conditions on independent content providers that undermine their ability to compete. Both AOL and AT&T have offered to allow consumers to purchase service from unaffiliated ISPs without paying for the affiliated ISP, others have

not. Moreover, pricing of network access to ISPs has not been addressed in detail. Price squeeze is still a distinct threat.

Paying once for service: Pricing must allow the consumer to choose any ISP they want without being required to pay for or go through the cable-affiliated ISP.

AOL Time Warner agrees to allow unaffiliated ISPs to purchase services without a direct commercial relationship. AT&T appears unwilling to do so.

Commercial transport service: Network owners should provide "broadband Internet access transport services"--which is the transmission of data between a user and his Internet service provider's point of interconnection with the broadband Internet access transport provider's facilities--on rates that prevent vertically-integrated access providers from engaging in predatory pricing or cross subsidization of their affiliated ISP.

3. BUNDLING

Bundling of services raises concerns because it provides a great deal of leverage, especially where monopoly services are bundled with competitive services. Because cable companies exercise control over bottleneck facilities and video programming, they have both he incentive and the opportunity to bundle these facilities with their other services and offer the entire package to their customers for a single price.

Unbundling: Unaffiliated content providers should be allowed to resell (and therefore bundle) the cable programming--i.e., to create a complete bundle--and/or through resale.

Prohibition on cross-subsidy: The bundled service must cover its cost.

4. CUSTOMER RELATIONSHIPS

Critical aspects of the customer relationship must be controlled by Internet service providers including marketing, billing and boot screen customization.

The importance of marketing and billing relationships is well known. The importance of controlling the boot screen is becoming better understood as the information age unfolds. The network owner can control the boot screen that the subscriber sees which creates the potential to steer customers. The initial boot screen is like prime real estate and advertising space. Location on the initial screen can predispose customers to use affiliated services at the expense of unaffiliated services. The system owner can take the best location for itself and lock out or downgrade others. Control of the boot screen also ensures that the direct relationship is with the transmission service provider. AT&T insists that customization of the boot screen be negotiated, thereby retaining control over the independent ISP.

Wholesale relationship between the ISP and the Network Owner: Network owners should enter into wholesale relationships with ISPs for the purposes of the sale of transport over the network and not interfere in the relationship between the customer and the unaffiliated ISP. By establishing this commercial relationship between ISP and the network owner, the network owner cannot dictate the relationship between the ISP and the customer including all the critical aspects of that relationship to the customer – billing, marketing, boot screen, etc.

H. CONCLUSION

The indictment offered by AT&T/AOL before they became vertically integrated with cable companies in a highly concentrated market clearly applies to the current situation in the U.S. and will likely continue to for the foreseeable future. The discussion of demand-side

problems points to issues that are long term in nature. The insightful discussion of network access as an essential function for communications technologies establishes the need for open access on an enduring footing. The recommendation by AT&T that the federal government in Canada not forbear from regulation was correct in 1997, just as it was in 1999 when AOL made a similar recommendation in the U.S.

What AT&T and AOL said as "unaffiliated" companies has even greater importance for other smaller "unaffiliated entities." Even as non-facilities owners, AT&T and AOL were still very large and powerful corporations. Their analysis makes a strong case that the problems facing unaffiliated ISPs are large and real. Their frank discussion of the potential problems and the specificity with which they offered solutions should be a wake up call to policy makers. All but the most powerful ISP are likely to fare very badly in a commercial setting where discriminatory access is not firmly rejected.

The remedies that AT&T proposed in Canada are well beyond what is being considered in the U.S. for cable TV. Telephone companies in the U.S. are under legal obligations that match the array of regulations AT&T advocated for cable TV and telephone companies in Canada. No one in the U.S. is advocating or contemplating such a heavy handed regulatory approach for cable. AOL's light-handed approach, with government triggering private negotiations and backstopping the process, has received considerable attention and has been adopted in a number of communities.

Combining the defense of open access with AOL's description of the necessary policy elements to ensure nondiscrimination through light-handed regulation presents a complete and compelling package. Public policy makers can readily adopt AOL's recommendations of a

few months ago to ensure that unaffiliated ISPs, who are unable to buy broadband wires, will have a reasonable chance of competing in the broadband marketplace that AOL believes will be the dominant form of communication in the century ahead.

AT&T's detailed road map to non-discriminatory access could be useful, however, in providing guidelines and benchmarks as private negotiators and the courts begin to wrestle with these issues. They suggested the following requirements:

1) Comparably efficient interconnection, with the identification of several options for physical and virtual interconnection, a list that can hopefully be expanded.

2) Open standards with change management.

3) ISP neutral network management.

4) Minimum content and service restriction, consistent with neutral network management.

5) Performance parameters, including a list of services to be made available and practices to be avoided.

6) Confidentiality of competitively sensitive information and protection against abuse of such information by vertically integrated broadband service providers.

7) A wholesale relationship between unaffiliated ISPs and vertically integrated service providers from whom the independents wish to purchase facilities.

8) Rates for transport service that are subsidy free and not anticompetitive.

9) Bundling and marketing provisions that prevent the abuse of leverage over monopoly services.

At the same time, AOL's desire to make open access as efficient as possible by using a public obligation to trigger private negotiations is valid. Ironically, the Telecommunications

Act of 1996, to which AT&T points in its demand for open access to telephone company xDSL services, had a negotiation and arbitration procedure in place to encourage implemention. AT&T's complaints about the Baby Bells reluctance to open their markets only makes it clear that obstinate corporations can make the process difficult, but that does not obviate the need for the process. The obligation to negotiate and recourse to legal authority for redress drives the process forward. Without the public obligation, there is little chance that open access will be provided for those who need it most -- the smaller niche players and innovative start ups who have defined the Internet.

RELIEF REQUESTED

Wherefore, for the above stated reasons, Petitioners respectfully request that:

1) The Commission deny the *Application* of AOL and Time Warner to transfer licenses.

2) If the Commission does not deny the *Application*, that the Commission:

   a) require AOL Time Warner to provide non-discriminatory open access to its cable systems that effectuates the principles described above, and that provides a private right of action for ISPs and individual subscribers;

   b) require AOL to divest its interest in DirecTV's ultimate parent, General Motors;

   c) require Time Warner, Inc. to divest TWE's interest in Road Runner;

   d) require AT&T to divest its interest in Time Warner, Inc., and require MediaOne to divest its interests in TWE.

Petitioners recognize that, unless Petitioners' *Motion to Consolidate* is granted, that the Commission cannot require AT&T and MediaOne to divest their respective interests as part of this proceeding. In the event the *Motion to Consolidate* is not granted, Petitioners request that the Commission prohibit AOL and Time Warner from consummating their merger until AT&T and MediaOne are persuaded to divest their interests in Time Warner and TWE respectively. For the reasons detailed above, Petitioners believe that ***no*** conditions exist under which the Commission may grant the AOL Time Warner *Application* while AT&T and MediaOne retain their interests in Time Warner and TWE.

CONCLUSION

For the reasons stated above, the Commission should deny the Application of AOL and Time Warner for transfer of licenses. If the Commission does not deny Application, it should impose the conditions requested above.

Respectfully submitted,

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